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### SOME RESULTS OF ANTE NATAL SUPERVISION: AN ANALYSIS OF ONE THOUSAND AND FORTY-TWO CASES.<sup>1</sup>

By R. MARSHALL ALLAN, M.C., M.D., F.R.C.S. (Edin.),  
Director of Obstetrical Research, University  
of Melbourne.

THE publication of the work done at the antenatal clinics in Melbourne and Sydney in recent years has been most encouraging to those engaged in obstetric practice. Brisbane unfortunately lacks the stimulus to good work and constant improvement which a teaching school produces. However, it is better that these figures should be placed on record partly to compare with those of the southern centres and partly to act as an incentive to the men who have in the past had to "carry on" under adverse circumstances.

Attendance at the Antenatal Department of the Lady Bowen Hospital is not compulsory for those admitted to the wards. Each year, however, has seen a large increase in the numbers so attending.

<sup>1</sup> Read at a meeting of the Obstetrical and Gynaecological Section of the Victorian Branch of the British Medical Association on November 26, 1925.

The hospital does not admit patients whose pregnancy is under six months' duration owing to the lack of accommodation. Despite this fact, many women attended to find out whether they were pregnant or if pregnant to ascertain the period they had reached and the date of labour. Some stated that they desired a live baby after a history of miscarriages or possibly eclampsia and many others simply wanted to know if the baby was quite healthy.

The list of cases has been compiled from the records of the Lady Bowen Hospital from 1923 until 1925. It comprises only those women seen in the Antenatal Clinic for varying periods and subsequently delivered in the hospital. The total amounts to one thousand and forty-two, three hundred and ninety-five *primiparae* and six hundred and forty-seven *multiparae*.

### Complications of Pregnancy. Albuminuria.

Albuminuria was noted in one hundred and fifty-four cases, to a slight degree in one hundred and twenty-five and to a considerable extent in twenty-nine. The patients suffering from a mild form were treated as out-patients, but all those with the

severer types were admitted at once for more detailed investigation and treatment. During part of the period under review in addition to the estimation of blood pressure, the amount of albumin present, and the effect of rest and restriction of diet a routine examination of the blood urea content was made and the urea concentration test was performed. The latter test alone was not of great value in itself, but I found great assistance from the blood urea analysis. It always gave a valuable indication for interference. The upper limit of safety may be taken as forty-five milligrammes as far as Queensland is concerned. The highest reading noted in these cases was one hundred and ten milligrammes. The following histories are instructive:

A *primipara*, aged twenty years, near term suffered from definite oedema and albuminuria. The systolic blood pressure was 156 millimetres of mercury and rose to 178 in spite of treatment. The figure obtained by the urea concentration test was three and that for the blood urea was 110 milligrammes. Labour was induced. One fit occurred during labour. The child lived and the puerperium was normal. The blood pressure had dropped to 110 millimetres of mercury and the urine became free from albuminuria.

A *primipara*, aged twenty-four years, near term suffered from considerable oedema and albuminuria. Her urine contained numerous granular and hyaline casts. The systolic blood pressure was 195 millimetres of mercury. The figure obtained by the urea concentration test was three and that for the blood urea was 98 milligrammes. Labour was induced. Five fits occurred during labour. Forceps were applied and the placenta was removed manually. The child lived. The blood pressure dropped to 120 millimetres of mercury and the urine became normal before the patient was discharged.

A *multipara*, aged thirty-eight years, who had previously had five children, was seven months pregnant. The urine contained a large amount of albumin together with granular and hyaline casts. The systolic blood pressure was 180 millimetres of mercury. The figure obtained by the urea concentration test was 0.9 in the first hour and 2.2 in the second hour. The figure for blood urea was 61 milligrammes. Labour was induced and a macerated premature fetus was born. The puerperium was normal. The blood pressure dropped to 144 millimetres of mercury and albuminuria was still present in the urine on the patient's discharge from hospital.

A *multipara*, aged thirty years, who had previously had four children was near term. She had one child living, but three had been still born. Her serum did not react to the Wassermann test. Her urine contained a large amount of albumin. The systolic blood pressure was 170 millimetres of mercury. The figure obtained by the urea concentration test was 1.6 and that of the blood urea 75 milligrammes. Labour was induced. The child lived and the puerperium was normal. The blood pressure remained at 180 millimetres of mercury and albuminuria was still present on the patient's discharge from hospital.

#### *Nausea and Vomiting.*

Whilst no true case of hyperemesis was observed, there were thirty patients who complained of more than the usual amount of discomfort associated with the early months of pregnancy. Constipation and hyperacidity were frequently found in conjunction with the nausea and yielded to appropriate remedies.

#### *Varicosities.*

Enlargement of the veins of the legs or vulva was noted in twenty-four cases. These patients made special comment on the amount of discomfort and

difficulty of locomotion caused by the enlargements. Many other patients manifested varicosities, but apparently the condition did not specially worry them.

#### *Contracted Pelvis.*

External pelvimetry was performed as a routine and in any suspicious case the patient was admitted to hospital for internal measurements. The number of patients with some contraction was small—eleven in all. The degree of contraction was slight and we did not see the more pronounced types noted elsewhere. No case of contraction of the outlet was observed.

#### *Prophylactic External Version.*

Prophylactic external version was performed in fourteen cases of breech presentation. There were several recurrences which were remedied before term.

The average period of performing version was about the eighth month.

#### *Cardiac Lesions.*

Mitral stenosis was observed in twelve cases. The symptoms were generally mild. Two patients were admitted to hospital for rest and treatment. Fuller reference is made to one case of endocarditis under the heading of maternal mortality.

#### *Pyelitis.*

Notwithstanding the prevalence of pyelitis in Queensland, there were only five patients whose condition was definitely diagnosed as such and who were treated accordingly. The condition of each patient cleared up under medicinal treatment and their subsequent histories during pregnancy and labour were uneventful.

#### *Hydramnios.*

Apart from cases of excessive amount of *liquor amnii* associated with twin pregnancies there were five others. The only foetal abnormality noted in their subsequent obstetrical histories was one case of hare-lip.

#### *Pulmonary Tuberculosis.*

Two patients with pulmonary tuberculosis were observed. One went to term and had a normal confinement, while the chest condition remained quiescent. For the other labour was induced because the lesion became active.

#### *Venereal Diseases.*

Syphilis in its primary and secondary manifestations was rarely seen and only one patient was treated. A routine Wassermann test was not performed on all patients, but only on those with a suspicious history.

Leucorrhœa due to the gonococcus was noted in several cases. This does not imply that its incidence was rare. Unfortunately no definite routine work was done at the hospital. Most of the cases of gonorrhœa were seen at the gynaecological departments of the general hospitals. Greater attention must be paid to this important prophylactic work

at the only public maternity hospital in Brisbane. *Ophthalmia neonatorum* was not observed to follow the delivery in any infective or suspicious cases.

#### *Ante-Partum Haemorrhage.*

Curiously no cases of *ante-partum* haemorrhage were observed during this period. All patients admitted to the hospital on this account came direct from men in practice.

#### *Obstetrical History of the Cases.*

##### *Presentations.*

The percentage of the various presentations was much the same as that given in the textbooks. The results may be tabulated as follows:

Vertex presentations	1,011 cases or 97%
Breech presentations	28 cases or 2·7%
Transverse presentations	3 cases or 0·3%

Closer analysis of the vertex presentations gave the following results:

Diagnosed as left occipito-anterior and delivered as such	693
Diagnosed as right occipito-anterior and delivered as such	253
Diagnosed as left occipito-posterior and rotated to left occipito-anterior	10
Diagnosed as right occipito-posterior and rotated to right occipito-anterior	33
Persistent occipito-posterior	22

Those figures relating to posterior presentations in which the occiput subsequently rotated forwards are hardly correct judging by one's personal experience. This has been largely due to inaccurate observations during labour. The estimation of the frequency of posterior presentations before labour mainly depends upon the period of pregnancy at which the examination was made. The antenatal records show how frequently the foetus turns during pregnancy from a vertex to a breech presentation and *vice versa*, whilst alterations in the position of the back from right to left and from anterior to posterior are quite common until the head is fixed in the brim. That bugbear of the practitioner, the right occipito-posterior presentation, must have been present more frequently than was noted. Many of the cases classified as right occipito-anterior were probably the result of a slow and painful rotation forwards.

Twins were observed in eighteen cases. The presentations noted were:

Both Vertex	12
Vertex and Breech	4
Both Breech	2

##### *Application of Forceps.*

Instrumental deliveries totalled twenty-nine—twenty-two *primiparae* and seven *multiparae*. This is in contrast to the figures usually obtained in private practice. Though I am a strong opponent of indiscriminate and especially too early interference, I feel certain that more infants would have been saved by a timely application of forceps. There is such a thing as waiting too long, while damage may be caused to the foetal brain from undue pressure of the maternal soft parts. The indications for the use of forceps were:

Delayed second stage	23
Persistent occipito-posterior presentations	4
Eclampsia during second stage	2

##### *Induction of Labour.*

Induction of labour was performed in nineteen cases for the following reasons:

Post maturity	9
Albuminuria	5
Contracted pelvis	4
Pulmonary tuberculosis	1

The indications in each case have been referred to under their appropriate headings. The methods employed have been either the use of stomach tube or medicinal means. I have used the stomach or rectal tube method for some time and prefer it to the bougie method of Krause. The results are more certain and the procedure has to be repeated only on rare occasions. With *primiparae* the cervix should be dilated with Hegar's instruments; with *multiparae* digital dilatation of the internal os is usually all that is required. In both cases the membranes round the internal os should be freely separated from the uterine walls. I usually prefer the rectal to the stomach tube. It can be inserted entirely within the internal os and no packing is required. The majority of patients fall into labour within twenty-four hours or at the latest thirty-six hours. There is no special need to remove the tube when labour commences. It can be left until protruding in front of the presenting part.

Castor oil and quinine were also largely employed. Pituitary extract was added in small doses to some *multiparae*. In spite of good accounts of its value from many authorities, I have been chary of using pituitary extract with *primiparae*. The percentage of success with castor oil and quinine was about 60% and better results were obtained the nearer the pregnancy was to term. Therefore, it was of greater value in post mature cases than with those characterized by albuminuria and contracted pelvis.

##### *Contracted Pelvis.*

A mild degree of *justo minor* pelvis characterized the group of eleven cases. Labour was induced in four before term. One of them had a previous Cæsarean section performed followed by an induction. Forceps had to be applied in one case, whilst in the remainder delivery occurred naturally. The infants were all born alive.

##### *Eclampsia.*

Theoretically with adequate antenatal supervision there should be no cases of eclampsia. Unfortunately this series contained eight cases equally divided between *primiparae* and *multiparae*. Two were fatal and will be referred to more fully in the discussion on the maternal mortality. Careful investigation of the antenatal records prove that the majority of the patients had not been regular in their attendances. According to the onset of fits the cases may be divided as follows: *Ante partum*, two cases with one death; *intra partum*, one case, recovery; *post partum*, four cases, recovery in all; *ante* and *post partum*, one case, fatal.

The conservative methods of treatment were used with the addition of veratrone by some members of the staff.

#### *Maternal Mortality.*

The records cannot show a clean sheet as four deaths were recorded. Two were due to eclampsia and one each to pulmonary embolism and endocarditis. The details are as follows:

A *primipara*, aged twenty-one years, was admitted to hospital with a history of having attended the Antenatal Department once on a previous occasion when she had albuminuria. On admission the urine became practically solid on being boiled. The blood pressure was 180 millimetres of mercury. She had seventeen *ante* and *post-partum* fits and died from cardiac failure.

A *primipara*, aged nineteen years, had a similar history to that of the previous patient. She was admitted to hospital in a comatose condition with the *os* fully dilated. Forceps were applied, but she died before the end of the third stage.

A *multipara*, aged thirty-nine years, had had four normal pregnancies. She had a normal labour and puerperium until the tenth day when the temperature rose to 38.9° C. (102° F.) on one occasion. It subsided and two days later, the patient was allowed to get up. While she was sitting on the side of the bed, she suddenly became dyspneic and died within one hour from pulmonary embolism. The uterus was well involuted and the lochia had always been normal.

A *primipara*, aged twenty-five years, gave a history of endocarditis. Delivery was normal. Her temperature became irregular and she suffered from rigors. She died on the third day from pulmonary embolism.

The eclamptic patients must be included as they had attended the clinic even though on only one occasion. Under the circumstances these deaths were unavoidable, but a better knowledge by the public of the value of antenatal supervision should prevent such catastrophes in the future. The other deaths could hardly have been prevented by antenatal supervision.

#### *Fœtal Mortality.*

Fœtuses born dead numbered twenty. The causes were as follows: Maceration, five cases; prolonged labour with forceps, five; asphyxia due to cord being twisted tightly round neck, four; toxæmias, three; prematurity, two; breech presentation, one.

Fœtuses dying whilst in hospital numbered three and death was due in all to prematurity.

These results are capable of considerable improvement. Better control of the toxæmic cases and in those deaths due to latent syphilis should reduce the corresponding figures. Probably several of the cases noted under the headings of prolonged labour and forceps application were really due to intracranial birth injuries. It is practically impossible in Brisbane to obtain *post mortem* facilities. Undoubtedly the majority of prolonged labours have been due to the inexperienced residents not notifying the honorary staff soon enough. More explicit rules for their guidance have been issued and better results can be expected in the future.

#### *Maternal Morbidity.*

The total number of cases classed as morbid according to the British Medical Association standard was 9%. One patient developed phleg-

masia. There were no other cases of definite puerperal sepsis. No account can be given of the more remote results of morbidity as the hospital has no postnatal clinic at present. Unfortunately they can be seen in large numbers at the gynaecological departments of the general hospitals.

#### **Conclusions.**

The results of this first stock taking of the records of a hospital which, though not a teaching centre, yet hopes to be one in the future, may be summarized:

1. The maternal death rate, though apparently not much better than the average for the State, was not due to lack of skill or attention in the antenatal department.

2. The fœtal mortality is capable of considerable improvement not only by antenatal care, but also during labour.

3. Patients suffering from albuminuria will have to be watched more carefully and regular attendance insisted upon.

4. There is need for more thorough work regarding venereal diseases.

5. A post natal clinic is required to follow up the patient and treat the more remote sequelæ of labour.

## SURGERY AND SURGEONS IN EDINBURGH AND SYDNEY OVER FORTY YEARS AGO.<sup>1</sup>

By R. SCOT SKIRVING,  
Sydney.

### PART I.—EDINBURGH.

In a paper such as I am about to inflict upon you it is not possible to make it full in any sense; I can attempt only a few outlines, mitigated, I hope, by personal reminiscences of the men of whom I may speak.

The Edinburgh Medical School during the late 'seventies and early 'eighties of the last century was indeed a splendid place of professional education. No doubt several great men had passed away, for GoodSir, Syme, Simpson and Hughes Bennett were dead, but the influence of their work and personalities remained. Turner and Rutherford taught anatomy and physiology, Sanders and Hamilton pathology. On the medical side Grainger Stewart was a most convincing teacher and Fraser a great pharmacologist. Among the surgeons were Spence, Annandale, John Duncan, Patk. Watson, Joseph Bell and John Chiene, all capable men and nearly all good teachers, while last and greatest, Lister himself was still in Edinburgh making a new world of the science and art which he adorned and transformed. But great as Lister's influence was, his doctrines and their practical application to surgery had not yet wholly changed the older methods of surgical practice and their end-results. A prophet, we know,

<sup>1</sup> Read at a meeting of the Section of Surgery of the New South Wales Branch of the British Medical Association on November 18, 1925.

has not always honour in his own country and so even in Edinburgh and Glasgow where his epoch-making work was so largely carried on, there remained a strong leaven of the unconvinced, the stubborn and the jealous. Still, he had plenty devoted disciples who adopted his methods and usually wisely, but sometimes unwisely, carried them out in their practices.

Annandale, Duncan and Chiene were, I thought, the most consistent followers; Joseph Bell thought he was, but, alas and alack, my master and much loved chief, James Spence, was of the older school and being unconvinced, did not play the part in the Listerian controversies that those who admired him most would have wished.

Edinburgh surgery at its best at this time was, on the whole, I think, in advance perhaps of any place in the Empire—or even anywhere else I might almost say—in its approach to modern methods as you now practise them in your daily work. There was plenty of preliminary washing of the parts to be operated upon and covering up the area with carbolized pads. Carbolic lotions 1 in 20 to 1 in 60 were in great vogue (they were used too freely and I often saw carboluria). Catgut ligatures prepared after Listerian methods were employed; sponges were in daily use and at least some faithful efforts to cleanse them before use were made. I think the instruments were fairly clean and often sterilized by boiling. Hands were washed, but not sufficiently, considering that gloves were unknown. No special clean overalls were worn at operations—indeed a kind of glory seemed to hang round the old blood-stained frock coat worn on these occasions, with cuffs by no means always turned up. Men had not yet learned unconsciously that once “cleaned up” they must not break the taboo of being surgically clean. An operator would pause and wipe his glasses with a hand fresh out of a wound and this often happened when the spectacled surgeon “looked through a glass darkly” dimmed with the condensation of the carbolic spray. Sterilized dressings of a sort were applied and if the tissues had been caressed by the operator and not torn, healing by first intention was sufficiently common not to be a marvel.

Perhaps happily the range of operations was not so wide as now. The skull was seldom invaded except to repair traumatism.

Gastric and intestinal surgery hardly went beyond the relief of a strangulated hernia. Gall stones under the impetus of Lawson Tait whom I saw operate in a case especially kept for him, soon fell under surgical treatment. Soon too the same original mind started the treatment of diseased tubes by abdominal section.

Ovariotomy was already common and the results of Thomas Keith were, I suppose, nearly as good as modern practice, but Keith was in advance of his time. He was an aseptic surgeon and “the most obvious and bulky brand of germ,” as Dr. Hamilton Marshall reminds me, namely, the “medical students

he kept away from his wards”; few indeed were the spectators admitted to his operations.

They were done in a small room with great attention to cleanliness, assisted by his son Skene, in complete silence. It was indeed a striking sight to see a huge cyst emptied (all cysts were tapped during the operation in those days) and removed by that father and son who never needed to be told anything. The pedicle was cautery-seared with a low grade of heat, with slow and meticulous care and with complete haemostasis. The sutures of the abdominal wall were through and through and passed by a huge handled needle armed with silk. As the point of the needle with the bight of silk in its eye appeared through the far side of the incision, Keith's son passed the end of the suture through the bight of the silk, which was then drawn back and tied. I suppose the Keiths found it quicker to reeve it through a silk loop than the eye of the handled needle.

In hysterectomy the pedicle was treated extra-peritoneally and held there by clamps or pins. The stump was dusted with iodoform or painted with *tinctura ferri perchloridi* and allowed to slough off—a slow, painful and horrid process.

The breast alone was removed or evulsed. The axillary region was left as a rule untouched—indeed, no real effort was made in any region to deal not only with the actual malignant growth, but with its related glandular area. Recurrences therefore were common and though even now our results are not quite consoling, the prognosis of cancer cases forty odd years ago was often a tragedy.

The kidney and ureter were dealt with only when some condition happened which screamed for interference. X rays were unknown and explorations of these structures were adventures in the dark.

Appendicitis was unknown as such. It was called perityphlitis. Sometimes it resolved and all was well; sometimes it didn't and a “phlegmon” formed. This also might “disperse”—I use the language of the time—or it might go on to abscess formation to discharge through the bowel. But many of the patients died of septic peritonitis. I never saw an appendiceal operation till I did one myself. As I look back I feel sure that although appendicitis as such was not recognized, the disease was not so common then as it is now. I say this, being not unmindful of the fact that all pains in the right iliac region are far too often put down to an appendicular source, that appendix dyspepsia is too lightly diagnosed and that appendicectomy is too often performed.

Suprapubic lithotomy was scarcely ever done, but lateral lithotomy was indeed the hall mark of the deft and brilliant operator. It was a great sight to see James Spence make one long deep cut, follow it with his forefinger, nick the urethra, get his forceps into the bladder round the stone and have it outside the body in a breath; but, as he said himself with a twinkle: “It was always wise to have another stone in your waistcoat pocket.”

It was Professor Spence of whom it was said that "his idea of Heaven was a place where the saved cut the damned for stone"—and I could quite believe it of "Dismal Jimmie" as he was always called.

Plastic surgery, as you who know the marvels of Sidcup will realize, was crude, although cleft palate and lip restoration was quite well done.

Orthopaedic measures did not often go beyond tendon division, but MacEwen's work on osteotomy was published, I think, in 1882, so a great impetus was given to this branch of surgery. *A propos* of talipes, I remember seeing the tendons in the normal foot cut by mistake, a regrettable incident to occur to one professor operating on the first born of one of his colleagues.

Eye specialism was well advanced and I suppose there are less striking changes in it in the years which have passed than perhaps in any other branch of our profession. I was House Surgeon to Argyll Robertson, a great oculist and a man of many parts and wholly charming. His colleague was a quaint and able old man called Walker who often played practical jokes on Mr. Spence, his life-long crony.

Argyll Robertson and, I think, Walker also had the curious habit of holding quite an array of instruments in their mouths while operating and removing them in sequence as required.

Argyll Robertson's name is probably familiar to the most modern among my audience, for the pupillary phenomenon in tabes is named after him, its discoverer. He and Fraser also worked out the action of the Calabar bean as a myotic.

Gynaecology was also well advanced and discrete. The younger Simpson, Berry Hart and Mathews Duncan and Croom have all left their mark on the literature and practice of diseases of women.

Anæsthetics were under no special supervision; chloroform was almost always used, given by a student on a towel, now I should say recklessly, yet deaths were not so frequent as you would have expected. Ether was very rarely used. Chloroform had its birth in Edinburgh and two generations passed before the virtues of ether converted the Scotch graduate to its more frequent use. Cocaine was unknown. Abscesses were opened with ether spray or after freezing with ice and salt. I shiver now when I look back and remember how with the valour of ignorance I poured on chloroform on a towel and cut off enough air to make a safely diluted mixture. But the operator's "do get him under" was enough in those days to spur you to a veritable debauch of chloroform.

Amputations were common and performed well and quickly, brilliantly even, by those who had practised in preanaesthetic times, when rapidity was paramount for the patient's sake. I have seen the hip joint disarticulated and the limb removed under thirty seconds. The long knife in transfixing the anterior flap just cleverly cut across the capsule of the joint, the limb was depressed and everted

and the head of the bone sprang out of the acetabulum with a noise like drawing a cork, while a deft movement of the huge knife slipped the blade behind the bone and in a moment cut its way out posteriorly.

How the well drilled assistants secured the vast bleeding flaps was a triumph of organized skill and coolness. It was not hard in these fateful moments for the patient to die right off. I do not think many of you will see a big transfixion amputation again. I only wish I could tell you that an uneventful convalescence of these amputation cases had been on a par with the operative dexterity—alas, lots of them suppurred, pus and drainage tubes were the accompaniments of many distressful days of pyrexia and a doubtful issue.

Bless me! I can remember patients in whom the skin incision healed and the deeper parts suppurred. How we used to syringe the cavity full of 1 in 60 carbolic and see the dirty fluid squirting out of the stitch hole abscesses with a cheerful tension. Things are better now and I am glad I have lived to see it.

Excision of joints for tuberculous disease was not uncommon. Owing to sepsis these cases were not obtrusively successful and a secondary amputation often followed.

On the diagnosis of fractures and dislocations these surgeons were artists. There being no X ray department to fly to in the first instance, infinite pains were taken in examination and the various possibilities discussed in joint injuries. Now the fine art of diagnosis in such injuries is being lost, for we, righteously I admit, rely very greatly on the radiologist to show to our very eyes what has happened, but I fear the clinical wisdom of our forebears has diminished thereby.

In the treatment of fractures we have made many advances. The Thomas splint alone, the experience gained in the war and the work of a few original minded enthusiasts have made an incredible diminution of the number of "lameters" one used to see limping about advertising our shortcomings. Of course when the injury is compound, Lister's teaching and the methods evolved in the war and proper splints have made the prognosis, say of a compound fracture of the femur, a very different thing from what it was fifty years ago with sepsis present and Liston's long splint as the main retention apparatus. I have seen in France in one hospital two hundred and fifty fractured femurs—a unique collection and an education unparalleled in surgery—more material to learn from in one day than in all the long, scattered, forgotten experience of a lifetime.

How easy it is to babble on to you with memories of the ways of these old days, but I had better go on to speak of personal recollections of the men who made and did surgery in the Edinburgh of these times.

#### Lister.

Lister, the greatest of them and one of the greatest and most useful of men, was an arresting figure—handsome, grave and benignant looking, one

realized at once that this was no ordinary man. If you want to read of the impression he made on his patients and of the life of the old Edinburgh Infirmary, get Henley's "Poems." They are very true and I recognize every word picture—Lister, Watson Cheyne, Mrs. Porter and others. I can see Lister as Henley speaks of him:

His brow spreads large and placid and his eye  
Is deep and bright with steady looks that still;  
Soft lines of tranquil thought his face fulfil,  
His face at times benign and proud and shy.

His wise rare smile is sweet with certainties  
And seems in all his patients to compel  
Such love and faith as failure cannot quell.

One is often asked was Lister a great, a brilliant operator. I should say he certainly was not brilliant. In the restricted field which then obtained he was sound, careful, competent and in spite of his profuse perspiration, I do not think he was nervous. I have heard him say as the sweat poured off him: "Oh, those septic drops"—as if anything that emanated from him could be other than pure! I do not remember any abdominal surgery done by him. I think he was singularly free of envy, hatred and malice. He provoked love, trust and loyalty and in spite of dark days when his work seemed "no painful inch to gain" against the atmosphere of inspissated disbelief and obstinacy, I think he must have felt, even as Bacon felt under far different circumstances, that the truth would prevail and that his "fame and name might be left to future generations and foreign nations."

#### Annandale.

Annandale was a capable, bold, neat handed surgeon, with a good deal of originality, but not scientific. He was in no sense a learned man. I have heard one of his sour-minded colleagues most unjustly call him a "bimanous idiot," which he was not. Annandale, in common with Lister, Bell, Chiene, Watson and Duncan, had been brought up at the feet of James Syme; they were all most excellent surgeons in different ways (by the way, Bell, Watson and Duncan were all more or less glorified general practitioners). My memories of him are not now vivid. He was a poor teacher, but his work was excellent. Skene Keith was one of his two residents and looked after his father's cases as well as Mr. Annandale's.

#### John Duncan.

John Duncan was a man of fine presence, tall, imposing, imperturbable and unpunctual. In spite of private wealth he was industrious and scientific minded. A cool operator whose end results were admirable; under the most trying circumstances his favourite expression was "quite," a kind of pious ejaculation which seemed to give a sort of Mesopotamian peace to all who were present. J. T. Wilson was his House Surgeon a year or so after my time.

#### John Chiene.

John Chiene, "plain, honest John Chiene," was more deeply imbued with Lister's doctrines than

any of the others and he tried hard indeed to carry out his master's teaching. He was a fine anatomist and a good plain surgeon, acutely conscious always of his responsibilities. He taught plain roast and boil surgery better than any one else. John Lockhart Gibson, of Brisbane, was his enthusiastic and most competent resident.

Chiene, in spite of his simplicity of mind and manner, was unconsciously a bit of a *poseur*, yet his posings were amusing and were a part of his mental make-up. I think he intentionally exaggerated his Scotch accent, thinking perhaps it made his similes and stories more effective. Said he: "You ask me, gentlemen, what textbooks I recommend in surrgerry. I know of two above all, the Bible and John Hunter. Yes, gentlemen, never forget the Bible. There's good stories and bad stories in it, but the surrgical teaching is sound—so is John Hunter's."

His teaching methods were largely Socratic. He asked the class questions and took a part in the answering thereof himself. When no one could answer the query he looked solemn, sighed deeply and ejaculated: "God knows!" Anyway junior students had much to thank him for and he was a dear, simple, unworldly man and a good surgeon. Poor fellow, he died only in recent years having, I fancy, outlived all his hospital colleagues.

#### Patrick Heron Watson.

Patrick Heron Watson had been at the Crimean war. He was a really good surgeon, rather pompous and with a very ornate manner. Like Bell, Duncan and many others, he saw many medical cases; to them a surgical patient was more or less a man with a guinea in his pocket and they deserved it, for they were admirable practitioners.

But Pat. Watson was more—he was a bold, wise, deft surgeon. I think he was the best operator of his time in Edinburgh. I saw him put a small trochar into a big axillary swelling and when red blood spurted out instead of the looked for pus, he withdrew the cannula, put his finger on the tiny hole and said, without emotion: "An axillary aneurysm; I shall tie the vessel tomorrow." He was a great *gourmet* and could have played the part of a *chef* with success. He looked like Napoleon III. I remember meeting him on a West Highland steamer and hearing him give my sister a lecture on the boiling of rice, "rejecting those grains which float in cold water." At that moment one of the wire springs holding us to the quay carried away and greatly damaged a poor fellow's leg and so we all forgot about the cooking of the rice!

#### Joseph Bell.

Joseph Bell was a great character and the original of Conan Doyle's Sherlock Holmes. I dressed with Bell, as also did Conan Doyle and Orme Masson, of Melbourne. Bell was a high class general practitioner, with much surgical ability. He wrote an excellent little manual of operations. He thought himself a complete follower of Lister; but he was not; I often smelt pus in his wards. But all the

same he was a good teacher and a swift, capable operator who did not suffer from nerves. He had a huge following of noisy students, a fact which made Mr. Annandale one day say in his theatre in his best English accent: "Be good enough to close the outer doors and shut out the noise of Dr. Bell's rabble."

Bell was at his best at a kind of informal out-patient clinic, which formed part of his daily round and teaching. Wisdom, wit, experience and useful knowledge flowed from his lips as he shrewdly interrogated the patients as they came before him. All sorts of odd facts came out which remained etched in our memories.

A man walked in. "Ah," said Bell, "I see your right testicle is shrivelled." The patient gasped, involuntarily he covered himself with his hand and whispered: "Surely my trousers are not open?" "No, my man, your trousers are all right." Then turning to his class he said: "Notice the white patch of hair in this man's beard over the left mental foramen—almost constantly where this is seen, is the testicle of the same side atrophied."

This is not an absolutely constant association, but it is very frequent. I shall not stop to discuss its explanation even if I could.

One day a pale, pimply, furtive looking youth, with dilated pupils and damp, clammy hands, came into the theatre. "A masturbator," said Bell, with conviction. "No, no, Sir," said the youth, "I'm only a journeyman baker."

A woman walked in with a small child. "Well, madam, how is Burtisland today? I see you walked up from Grantown. So you are working in the linoleum factory and what did you do with the elder bairn?"

The woman gasped, so did the class, when she admitted that all was as the professor had said.

Bell then said: "It is quite easy. I saw the digital eczema which linoleum workers suffer from. Of course, she came from Burtisland, where alone near Edinburgh is there a factory. That she walked from Grantown was certain, for I saw the special red clay on her boots which exists on the roadside. She had a very young child with her, but she was carrying a coat suitable to an older child, probably left with a friend." All very easy if you know how.

Another young out-patient came before him and at once he said: "A case of congenital syphilis; look specially at his teeth, they are Hutchinson's."

"No, Sir," said the man, removing an upper denture, "it was not Hutchinson made them, but Mr. Macpherson in the Lothian Road." Bell never turned a hair, but said instantly: "Gentlemen, Mr. Macpherson is a true artist, for he has fitted teeth to the constitution of the patient."

Yes, Joseph Bell was animated, bright, amusing and instructive. There never was a dull moment in his hospital service. He was not a profound scientific surgeon, but he was a capital all round doctor and a good operator. I hold him in kindly and grateful memory.

#### James Spence.

I now at last come to tell you of James Spence, Professor of Surgery in the University and Surgeon to the Queen in Scotland. It is a joy to me to remember that I was his House Surgeon.

Spence belonged to an older generation than any of those men I have mentioned. He must have been born about 1812. He was past his prime, but he would not admit the disabilities of age, wore boots, I fear too tight, a succession of beautiful wigs of varying lengths of hair and quite nice clothes. He kept at work till the end and died in harness well over seventy.

He was somewhat depressing in manner and speech, hence his nickname "Dismal Jimmie," being also much given to prophesy evil. He was a fine anatomist and a beautiful dissector, admirable at the ligature of vessels in their continuity or lithotomy, but I must admit that he was too old for great operations and was pitifully nervous and disturbed before he began. He would go in and out of his retiring rooms, prostatically teased, saying to me: "Get out, there's only one capital operation I can't perform in public." As soon, however, as he had made his first incision all his trepidation dropped from him, "yea, even as a garment" and the vigour and decision of earlier years were once more his own.

Although I never clerked with Spence, I used to hang about his wards and I attended his systematic lectures. There I attracted his attention; I fell asleep in the gallery and he noticed me. He stopped lecturing and raising his voice, called out: "Come down, Eutychus, come down!" The class roared, for its members had had a godly unbringing and understood. I awoke and looking very sheepish, came down to the arena. "Sit down," said Spence, "you'll be safer here." I hope that your Biblical knowledge will recall the long sermon of St. Paul.

This incident gave Spence a friendly interest in me, which became greater when he found I could bandy Bible texts with him and talk about ships, for he had made several Eastern voyages in the days of the old East India Company. He would not agree to making the surgical residencies posts to be gained by a special competitive examination, as was the case with the medical residencies. He insisted on choosing his own man, but usually one who had first served as a House Physician.

I was chosen by him just after finishing my term with Sir Douglas Maclogan, a truly delightful, learned man. The latter had the curious distinction of having been President of the Royal College of Surgeons and later on President of the Royal College of Physicians.

"So you've been with Sir Douglas," said Spence to me. "Well, I expect you to know how to treat the cases medically"—then he paused—"but I'll do the surgical work; Sir Douglas was once President of the College, but I sometimes didn't like his practice. I call to mind a case where he amputated the body from the leg; by that I mean he cut the flaps the wrong way."

Nor did he think too highly of Lister's prowess in surgery. I regret he did not play a good or useful part in the controversies on the new learning; he seemed obstinate and unconvincible.

He once said to me: "Oh, aye, Joseph (that is Lister) is a great physiologist, but God knows he's no surgeon." No wonder then that various regrettable things happened in Spence's wards for lack of a ready adoption of obviously better methods in practice in the same hospital. Nevertheless he was really a fine surgeon—obstinate, often passionate and prejudiced, but kind at heart, charitable and devoted to his profession. I owe much—much indeed—to this curious, dry, caustic old Scotchman. I love his memory, I am proud that I was his House Surgeon, and I have to thank him for more things than I can remember. As I leave off speaking my little *éloge*, I remember various small things about him:

I think he was a little vain, dear man that he was and had a series of wigs, but he did not really dislike telling stories against himself. One day he told me that in returning from a consultation at North Berwick he saw a very nice girl sitting opposite to him in the carriage and he intended putting on his glasses to see her better. With curious absent mindedness he took out his teeth and put them on the bridge of his nose, which greatly alarmed the young woman, but he reassured her and all was well.

One day I was giving chloroform for him while he was removing an upper jaw. His assistant surgeon was a good fellow, but jumpy and garrulous at wrong times. As Spence swayed the jaw adrift with Ferguson's lion forceps, a big spout of blood came from, I think, a big palatal branch and the assistant surgeon said excitedly: "Mr. Spence, Mr. Spence, look out, there's a big vessel." Spence laid his instruments down, slewed the patient's head till the blood spouted into his assistant's face and said: "Alec, my man, for God's sake hold your tongue and give your brains a chance."

When Spence fell ill of his last illness, it became necessary to remove two gangrenous toes. I gave the anaesthetic and I think Chiene and Duncan operated. No sooner was Spence conscious than he called for his butler and told him "to fetch a plate and my scalpels." Turning then to me he remarked: "I want to look at the sheaths of the tendons." Dear me, how I liked that old man!

If at the final assize before which stand the just and the unjust, the useful and the worthless and his deeds are reckoned up, surely he will be among those who are "dismissed with honour."

#### PART II.—SYDNEY.

About the year 1883 Sydney was no doubt a city. It had 273,400 inhabitants. It was the seat of government of a big, prosperous, contented colony. It possessed a cathedral and owned a university where a good deal of excellent learning could be gained always excepting medical lore. For it was not till 1883 that the medical school really took

shape under the impetuous urge and organizing force of Anderson Stuart. I did not in these days feel that Sydney was a city; it was just a great big jolly colonial town with kindly folk who had not yet developed class consciousness, and whose gods were not yet movie-shows and alien political cults. The tradition of honest work still persisted and the necessities of life were cheap. Anyone who was sober, industrious and honest could earn and save enough money to prevent himself becoming a burden on the State. Brisbane today, in spite of its Bolshies and political poisons, reminds me of Sydney in 1883—just a big, untidy colonial town. Now Sydney contains 1,012,090 inhabitants.

Of the one hundred and eighty-six doctors practising in and about Sydney in 1883 not one had received his medical education there and of those practising then only twenty-seven are on the register now. There are today no less than eleven hundred and fifty-one doctors resident in greater Sydney and of these eight hundred and one received their medical training at the University of Sydney. In the early 'eighties it was not difficult to earn a living as a doctor. Any sober, honest doctor of fair abilities could always get a practice in New South Wales. I could not say the same to-day.

The Sydney Infirmary stood behind a high fence in its present site, with the small residents' quarters where the porter's lodge now stands. I forget how many beds it contained. Although many changes in buildings and in nursing had taken place, it still was not up to the standard of a good British hospital in construction, equipment or management. St. Vincent's and the Children's Hospital were on much the same plane of development.

The Prince Alfred Hospital had just been opened with less than two hundred available beds. It was really the creation of Sir Alfred Roberts, as much the child of his industry, persistence and power of taking infinite pains as was the making of the Medical School the life's labour of Anderson Stuart. I shall refer to Alfred Roberts later. No expense had been spared over the construction of the Hospital and its affiliation with the University for teaching purposes was a great and helpful step, not only for purposes of instructing students, but because such a connexion was a wholesome stimulation to the honorary staff to make themselves competent.

Prior to the formation of the Medical School the medical life and work here was just much as it had been for many years, ever since responsible government had brought to an end the old Crown Colony medical service of the very early years of the settlement at Port Jackson.

There were in Sydney plenty of good practitioners and some very bad—quaintly bad, dangerously bad. Of the good men of long, long ago, Dr. Bland was one, a very striking figure and, as Dr. Dunlop has told us so well, both bold and capable, a man who at that time could tie the innominate artery, could have been no mean surgeon.

But up to 1883 there was no outside stimulus to advance—no teaching, no students to criticize and

no very frequent medical meetings, nothing indeed to arouse emulation, to spread knowledge and to spur the individual to study.

Medical journals were fewer, communication with home slower and less frequent and so the majority of the profession just sauntered along in unprogressive ways, for the most part doing as they had been taught ten, twenty or more years earlier in a British school.

But a great change was now imminent. A medical school was being formed, a medical degree could be obtained on the spot without going home. One hospital, thoroughly up to date, had been built and the appointment of its staff lay in the hands of a conjoint board composed of the University Senate and the Directors of the Hospital and further, one of the duties of the staff was to teach.

This making of the Prince Alfred Hospital a university teaching institution was an example to other hospitals and a stimulus to industry to its own honorary medical officers.

The Sydney Hospital was rebuilt and fell in line with the Prince Alfred Hospital as a clinical school, as ultimately did the Children's and St. Vincent's Hospitals.

With these changes came more frequent meetings of the profession, gatherings where members of the two societies read and discussed papers, thereby being stimulated to learn modern knowledge and methods and there was much room for such new knowledge.

Appendicitis, of course, as a definite morbid entity was entirely unknown. It was just "inflammation in the belly" for many a day to various old timers. I saw one such leave an appendicular abscess "to mature" till it pointed externally and then he opened it with great *éclat* with the patient's razor. Another, not so very ancient, got me to help him with an amputation of the thigh. He got the limb off creditably enough, but he tied all the vessels with silk (Lord knows if he boiled it) and left the ends long. I implored him to cut them short and chance it. "No fear," said he, "at the school I came from we left them long to drain the pus." So all the threads were gathered into a sort of loose cord and left hanging out of a corner of the wound and were pulled on daily for weeks till they all separated; just exactly as was done during two years of misery with Nelson's amputation stump of the upper arm after the unfortunate repulse at Santa Cruz in 1797.

Lister's teaching and methods, however, were not unknown to the profession in New South Wales and in the hospitals and in the hands of the recently qualified were found carbolic sprays, whose noise and steam seemed to give great comfort and assurance to many that the best was being done, who at the same time forgot to wash their hands thoroughly or to abstain from coughing into the wound, for masks were unheard of flashiness.

Diagnosis often was distinctly vague; Sir Philip Sydney Jones used to delight me with

stories about a dear and prosperous practitioner who made his patients quite contented with the diagnosis of "an irritation on the liver" and he seemed to cure it. George Fortescue despised this man and said he earned his living "by giving his patients sympathy, but devilish little else." When practice was slack the old social doctor's wife used to say: "My dear, we will give a few big dinners" and the hospitality of the dining room seemed to attract "rats" to the consulting room.

Another old practitioner of a much lower type used to drive in an extraordinary vehicle like a hearse. He asked me what I did when patients had internal symptoms. I said that I stripped and examined them. "Not so for me," said this quaint practitioner, "I don't like practice like that, I just like cases that need a prescription." I suppose I must admit that the general standard of medical and surgical practice was definitely lower than in Edinburgh. More ignorant, incompetent and unteachable practitioners obtained to the square mile here than would have been found in Edinburgh. Nevertheless there were many who were far otherwise, keen, alert, competent, self-reliant and progressive. They were safe men and if their lot had been cast in any European centre of population or medical study, they would have most surely been in the van of work and discovery. But the air of a colony then did not stimulate research—you know best whether it does so now—and so they remained just splendid practitioners and no more. Except for much practical knowledge of hydatid disease which our unique opportunities here gave them, our best men contributed little to the world of medicine. But I must not forget Bancroft, of Brisbane, who discovered the adult filaria which bears his name.

I have told you how comparatively restricted was the field of operative surgery in Edinburgh; well, it was even more so in Sydney. Look at the hospital reports of say 1883—stricture, lithotomy, cancer of various organs, amputations, a few herniae, piles, often very badly done, trephining for injury; no word of gastric, intestinal, hepatic or renal surgery; appendicitis, the stock pot of the surgically inclined general practitioner, absolutely unknown. Ovariotomy was done excellently well; we had long passed the time when the first Sydney ovariotomist filled the true pelvis with weak carbolic oil as a finish to his work.

Of the men composing the staffs of the various Sydney hospitals, it would be unbecoming of me to say too much; we are still actually too near A.D. 1883! This, however, I will say, that a few men on these hospital staffs were really unfitted for their positions by reason of age or ignorance or obstinacy. They were a shame and a peril and in some instances illustrated the evils of appointments to such special and onerous posts, being at the mercy of all sorts of influences other than the really great one of professional competency. These men, whether "they slew in chariots or on foot," had their paths

watered by the tears of the widow and the orphan, though happily for their peace of mind they did not seem to know it.

Fortunately there were few of such men. The breed soon died out and was not replaced, for by age limits, requirement of certain qualifications and experience and the making of appointments to lie mainly in the hands of bodies removed from political or other evil influences, no one could really hope to become surgeon to a big hospital unless he was reasonably competent for his work.

About 1883 was indeed a great time for a young medical man to start practice. The old colonial days of medical practice were coming to an end. Population was increasing, our hospitals were being made up to date, a medical school was arising and the spur of teaching made everyone, young or old, within the sphere of these influences anxious to make his own ignorance as little glaring as new industry and a desire to learn would enable him to do.

Such then was the general setting of the medical life and ways of Sydney all these years ago. What shall I dare to say of the doctors?

**Sir Alfred Roberts.**

I take Sir Alfred Roberts first. I have already mentioned him; to his energy and devotion is due the existence of the Prince Alfred Hospital. He needs no other monument. Even as the visitor to St. Paul's is told to look around for a monument to Sir Christopher Wren, so may we regard the Hospital in Camperdown.

Roberts was a good, careful, slow operator, clean, tidy, meticulous and safe. He took quite a time to decide that he would do an operation, but he did it well and then he rested! He sometimes sacrificed matter for manner, but all the same I wish we had a few like him in these days of slang and slipshod vulgarity in speech.

I was the second Medical Superintendent of that child of his age, the Hospital. He was always about it and was sometimes rather a trial. After a "southerly buster" he would go round the corridors with a spotless handkerchief, looking for dust in corners. This he would wipe and show me the dust with reproachful eyes, saying: "Why is this?" without words. I used to mutter something about the "act of God." He loved good "window dressing" of all kinds. I daresay I was sometimes a trial to him and I admit I did not always see eye to eye with him, yet I recognized that if he had not a brain of the highest type, yet he was an example of what single-hearted devotion to an unworldly, useful object could accomplish and so he gave New South Wales the Prince Alfred Hospital with its far-reaching results on medical education and the healing of the sick. We ought all, therefore, to praise his name and useful career.

**Sir Philip Sydney Jones.**

Of Sir Philip Sydney Jones I half fear to speak at all, lest my judgement be warped by the false

balance of affection. He was the best qualified man in Sydney, a safe, capable surgeon and a wise physician. His type was not uncommon fifty years ago. In Australia we still have another of the same kind, full of wisdom and experience and a mine of clinical knowledge—Joseph Verco, of Adelaide.

Sydney Jones stood for all that was best, dignified, upright and competent in the profession in Sydney.

**George Fortescue.**

George Fortescue was Senior Surgeon to the Prince Alfred Hospital. Tall, commanding in figure, his handsome, clean-shaved face was striking in its firmness and intelligence. He loved literature and sport of various kinds. He was a good all round surgeon, ready to learn modern ways and Listerian methods from men greatly his juniors in years and experience. If he had practised in London he would have risen to the top of the tree and as he often said to me, half in joke: "By God, I'd have written a book!" But it was not to be. Life in the Colony, the lack of intellectual stimulus as well as the need of making a living chilled his productive faculties and like many another he just became a fine type of practitioner. His surgery was sometimes a little rough. He was a little forgetful of details of technique and of those Listerian practices he was so keen to assimilate.

He had a wide knowledge of his profession and gloried in it and in the advance of Australia. He looked like Sir William Ferguson or Robert Liston in his fine imposing presence and was a delightful companion and a great, lovable man whose kindness to one young stranger in a strange land will be always remembered.

He was indeed a good friend, but a good hater too and could fight well in more ways than one. That reminds me of an incident in connexion with seeing a patient of his.

I often did night work for George Fortescue, as he lived up the Parramatta River. One evening I got an urgent call to see a patient for him in the Black Wattle Swamp. Unwillingly I went and stumbled my way over drains and rubbish till I saw a light in a cottage. After some small trouble with the door I got into the kitchen, where I found a huge, sinister looking woman, sitting over the fire in "the trailing garments of the night." She looked at me with her small evil eyes and said: "And who the hell might you be?" I replied with the dignity of the early 'twenties that I was the doctor. "Doctor be damned," said she. "You're not Fortescue, you're only a shlip of a bhoy." "Where's the patient," said I. "Go into the next room an' you'll see." I went and found a big man in bed slightly sober. He'd had his supper, for I saw parts of it indeed on the bed clothes. He was doing no harm, so I left him undisturbed and returned to the partner of his cups—I wasn't feeling amiable. "Well," I said, "for what reason did you send at this hour for a doctor?" "Why, for Fortescue to give Patrick a drubbing." Fortescue was keen on boxing and a great admirer of Larry Foley.

I told her a few home truths and she sprang at me like a fury, bits of her gross body oozing through her much ventilated, ill-repaired "nighty"—spitting wicked words and sepsis at me through a hedge of pyorrhoeic teeth. She had the candle stick as a weapon, but I got behind her and grabbed her hair; fortunately it was before shingling was known and I had something to catch hold of. A horrible struggle took place with only the firelight to light up the combat, but I was younger and of less displacement and I got the best of it. I certainly admit I slapped her all I could, while she did not even get a bite into me and only succeeded in bruising me. Finally I flung myself clear of her, into the darkness of the swamp, with fury in my soul.

This, gentlemen, is the only occasion I have ever actually fought with one of the gentler sex, but the circumstances may perhaps excuse me.

Later on I told Dr. Fortescue about the affair and suggested two guineas as a suitable remuneration for so arduous a night visit. It was in the days of small fees and Fortescue replied: "Not at all, my boy. One guinea is quite enough. They are old patients of mine and besides you only thrashed one of them!"

How well I remember poor Fortescue's last visit to the Prince Alfred. He was sickening with typhoid, but refused to lay up. He was a lover of literature of all kinds and made a ward visit a joy with the brightness of his wide-ranging, well-known talk. The Sister of his ward was not only a great nurse, but likewise a sprightly dame of much book knowledge and they often played a little intellectual lawn-tennis between professional reports as they passed from bed to bed; but this day he was deadly seedy and her talk irritated. Suddenly, at the end of the ward, he stopped and looked at her. "Sister," said he, "as the shifting sands of the desert are to the feet of the tired traveller, so is a woman of many words to a quiet man. Good afternoon." And so the dear man passed from the Hospital, never to return.

He died, deeply regretted and missed by us all, at forty-seven of typhoid fever.

**William Goode.**

William Goode was a big, quick-tempered, soft-hearted Irishman, sometimes obstinate and wrong headed, but a man of ability and learning, a very conservative surgeon, usually "agin the government," but always, to his honour, the paladin of lost causes or the underdog. He was an ex-naval surgeon and had great ideas of discipline and official routine. He knew his profession well, but it often required "T.N.T." to bring him to the point of operating; when he did operate, he did it wisely and well. I hold his memory in respect. He died, not an old man, I think of pernicious anaemia.

**Frederick Milford.**

Frederick Milford was a fine, plucky, manly fellow—a keen yachtsman and utterly devoid of

physical fear. In earlier years with his knowledge abreast of the knowledge of the time and with his absence of nerves he must have been one of the leaders in the profession. In my time he was no longer a young man and although he was on the teaching staff, I do not think he took a very active part. He was very kind to me and I remember him with respect for his fine character. I got, I must admit, my post at St. Vincent's through him in the following way:

One day when it was blowing hard I went out sailing with him; we were close reefed and there was a good deal of sea outside the Heads. We were most improperly towing a dinghy and, of course it broke adrift. I said that if he would take the way off the yacht I would jump into the dinghy. He did not deaden the yacht's way sufficiently; I slipped on the wet rail, struck my thigh on the transom of the dinghy as she rose on a sea and plunged into the water. Those on board—I remember Knaggs and MacCormick were there—thought I must have broken my thigh. I managed, however, to get into the dinghy and baled hard, for she was half full of the Pacific Ocean.

After a couple of efforts a rope was thrown me and we got safely into shelter. I was blue with cold and hardly able to crawl from the blow on my thigh. Milford's greeting as I got below was: "I thank you, sir. But if my son had been on board you would not have been permitted to do as you have done!"

I was a fortnight a cripple, but at the end of that time the old man, who then had great influence at St. Vincent's, told me quietly I had better apply for the vacant surgical post there. I got it.

Eye specialism was the first offset from general surgery in Sydney. I think Dr. R. Bowker, senior, a very able old practitioner, was its first successful exponent. Then came Cecil Morgan, Thomas Evans and Odillo Maher, all excellent at their work. Maher began with a general surgeon's appointment at St. Vincent's.

In throat and ear work Dr. Brady is the doyen of his specialty. He served an apprenticeship to general surgery at the Sydney Hospital, just what is right and proper.

He, by precept and example, has played no small part in his particular craft in Australia.

The study of children's diseases owes much to Dr. Clubbe and above all do the public and the profession stand in his debt, for he like Sir Alfred Roberts has practically a great hospital standing today as a monument to his life's labour. I bracket him with Chambers and MacCormick who perhaps have done most for the advancement of surgery in our city in the last forty years.

**Thomas Chambers.**

Gynaecology owes a great deal to Thomas Chambers. He came to Sydney a mature man, with an established London reputation. He quickly acquired a large special practice. Owing to matters long forgotten he did not get the

gynaecologist's post at the Prince Alfred Hospital. This was filled ably by Dr. Foreman, who is happily still with us; he too was a pioneer in his department. Dr. Chambers, however, was made a member of the staff of the Sydney Hospital with Dr. Worrall as his most capable colleague and gynaecology soon became important departments of both the metropolitan hospitals. Chambers was a wise, shrewd diagnostician and a sound, safe operator. His technique reminded me of Thomas Keith. He was in his own way an aseptic surgeon—very simple in his methods, with excellent results. He usually dressed his wounds with lint soaked in laudanum. His stitching of the wounds in an Emmett's operation with sutures rove through wire spirals and clamped in perforated shot, was very neat.

His was a quaint personality, with a wit of his own. If you want to hear delightful stories of his ways and of Goode and Milford, go to Dr. Purser. Chambers was extraordinarily kind to young men starting in practice, as was also another well-known medical man, Dr. Samuel Knaggs. I do not say more than I ought when I ask the younger generation of gynaecologists to remember with respect the labours of this, the first definite specialist in women's diseases in Sydney.

**Thomas Fiaschi.**

Of Thomas Fiaschi I would like to say that when he came to Sydney from Windsor his arrival was a stimulating event; his boldness, his keenness and his wealth of culture, both professional and general, acted as a tonic to more lethargic men and what is more, still does so.

**Sir Alexander MacCormick.**

When medicine in 1883 was in a changing condition, there arrived in Sydney one who, like Dr. Chambers, was to exercise a far-reaching effect on surgery. A young Scotchman came to the University to demonstrate anatomy and thereby to lay the foundation of that practical knowledge of the human body which has made him so safe an operator. It is true that he never developed the faculty for speech, written or spoken, and so the record of his deeds dies largely with him, except in the minds and work of those who have witnessed his operative dexterity and absorbed something of his uncanny clinical acumen. But they also shall pass, so it is as well to set out here the effect that the life and work and example of this master craftsman has had on those who were his contemporaries and his pupils.

He certainly taught common sense. He exemplified in diagnosis the result of long gathered experience and showed what it was possible for a man with perfect nerves, great shrewdness and judgement, a practical knowledge of anatomy and wonderful dexterity of hands to do in surgery. He thus gave generations of students a model to follow and further he gave them self-confidence after no doubt many stumbles, for what looked simple enough in this man's hands, was often tragically difficult in the unskilled. Surgery in Australia is

therefore, in my judgement deeply indebted to the life's work of Alexander MacCormick.

In these germinating years, though there was much to admire and the air was full of promise, yet it must be admitted that all was not wholly well with the practice of our profession.

Some young reformers we had among us in those days who chafed at a gradual betterment in things not right. They tried sometimes to dragoon their weaker brethren into ways of surgical righteousness, either by abolishing their dangerous activities altogether or at least making their chances of doing harm very small. I did not always quite like their "quick-lunch" methods, but their intentions were wholly admirable and I do not doubt that the results of the various unpleasant things they did, lessened undesirable adventures in the operating theatre and made fewer the payment of claims on life assurance companies on deaths out of due season.

And now to make an end and release you from the burden of listening.

Men of my type of mind may deplore many of the changes we have lived to endure, such as political creeds which revolt most of us, their application in world games in which the stakes are the happiness of nations and the shifting of natural frontiers. Still more painful and absolutely at one's door is a changed Australia, with men holding points of view and ideals which must distress every sane or educated man and which make me long for the Australia of my boyhood, yet no one could have any such unhappy thoughts over the advance in professional knowledge and skill.

Medicine and surgery have gone ahead by leaps and bounds since I entered the profession. What just pride may we not take in these marvellous advances which indeed are but the commonplaces of your daily life, but which are the wonder and often the despair of those of us who are old enough to remember what was the state of ignorance even so recently as forty to fifty years ago.

Yet do not be intoxicated by your material success and advancement in science and craftsmanship; also do not forget old clinical methods. Remember clinical examination ought to precede the assistance given by ancillary information gained from the radiologist or the biochemical expert. Forgive me, too, if I ask you also to remember that your huge medical school, just recently was, nay, still is, somewhat clogged by the amount of grist it is expected to sift and grind. I am not satisfied that this grist is always of the best grade and so, an unboltable portion exists which is not likely to be turned into the highest type of medical man, the type of doctor who advances his art and is a credit to it. I had rather that our school turned out quite a moderate output of the best type of graduate than a much greater number of baser metal, for after all neither in numbers nor in blatant success is medical salvation to be found, "for what shall it avail a man if he gain the whole world and lose his own soul?"

A NOTE ON THE INTERMEDIATE HOST OR HOSTS OF *FASCIOLA HEPATICA* IN NEW SOUTH WALES.

By A. C. MCKAY, B.V.Sc.,  
Walter and Eliza Hall Veterinary Research Fellow,  
University of Sydney.

IN THE MEDICAL JOURNAL OF AUSTRALIA of February 6, 1926, Burton Bradley published the results of field observations in regard to the importance of fresh water mollusca of New South Wales as intermediate hosts of the sheep fluke, *Fasciola hepatica*. As a result of this work he considers that he is justified in establishing an *a priori* case against *Limnaea brazieri* as the transmitting agent of *Fasciola hepatica*. In the absence, however, of any evidence of positive results from the feeding of cercaria obtained by him from *Limnaea brazieri* to sheep or other animals used for experiment, it was not possible to accept his observations as conclusive. It is also noteworthy that he does not consider any of the other species of fresh water mollusca examined by him in New South Wales as of any great importance in this connexion.

However, the object of this note is not to discuss the former publication, even though my findings of a somewhat similar epidemiological survey of the same districts differ in many respects from Bradley's, but merely to record the fact that it has now been proved that *Limnaea brazieri* is definitely an intermediate host of *Fasciola hepatica* in this country. Whether it is the only intermediate host here yet remains to be seen, although at first sight it would appear that this is likely to be the case, as everywhere else in the world a snail of the genus *Limnaea* has proved to be the chief carrier, with the exception of *Physopsis africana* Krauss and *Isidora tropica* Krauss in South Africa and one of the *Physa* in North America. There are apparently only two common *Limnaea* existing in New South Wales, namely *Limnaea brazieri* and *Limnaea lessoni*; of the latter, however, very little is at present known of its importance as an intermediate host of any trematode parasite.

In *Limnaea brazieri* I have found at least three types of cercaria. All of these are pigmented to a certain degree, though one type appears much more so than the other two on account of the greater development of the cystogenous organs at the time of liberation of the cercaria from the snail. This latter type for the sake of convenience I will designate here as type A (encysting type), the other two as types B and C respectively. All three types are obviously fasciolid cercaria. Type A is distinctly heart shaped, even when at rest, while the other two are only heart shaped during locomotion by means of the tail. Type A corresponds very closely with Thomas's original description and illustrations of the cercaria of *Fasciola hepatica* which he was the first to prove passed through *Limnaea truncatula*. The other two types are oval when at rest or during locomotion by means of the suckers, type C being much more elongated than type B. There is a possibility that these two are only variations of the one type. I have not observed either of these two to encyst, though kept under observation for

periods of over twenty-four hours at a time. Type A encysts very readily and a quarter to half an hour may be taken as the average period from the time the cercaria leaves the snail until the cyst has formed. The tail is shed soon after the cyst has begun to form.

From a large number of *Limnaea brazieri* I obtained eleven diseased specimens in which the cercaria of type A were mature enough to be excreted naturally and from the cercaria thus obtained a number of experiment animals were fed with fodder contaminated with cysts. One animal has since died and some thirty-two fluke were recovered and identified as *Fasciola hepatica*, thus proving conclusively that this encysting type of cercaria found in naturally infested *Limnaea brazieri* is the cercaria of *Fasciola hepatica* and that *Limnaea brazieri* is an intermediate host of the parasite in this country. Whether it is our chief or only carrier has yet to be determined, but from my observations it appears likely that perhaps at least two other genera may also play some part in the transmitting of the parasite.

As I intend to publish later a more detailed account of my observations in the *Journal of the Australian Veterinary Association*, it will suffice here to mention briefly other species of our fresh water mollusca in which I have found Fasciolid cercaria: *Gabbia australis*, *Bullinus pectorosus* (in two varieties of this species), *Bullinus hainesii*, *Bullinus proteus* (redia only), *Bullinus gibbosa* (redia only) and *Bullinus hainesii* Tyron var. *pilosa* (sporocyst only).

## References.

F. G. Cawston: "Fluke Disease," *Journal of the Australian Veterinary Association*, September, 1925.

Burton Bradley: "Observations on the Water Snails of Monaro and New England, New South Wales, with Special Reference to their Cercaria Carrying Capacity," *THE MEDICAL JOURNAL OF AUSTRALIA*, February 6, 1926.

A. P. Thomas: "The Life History of *Fasciola Hepatica*," *Quarterly Journal of Microscopic Science*, Volume XXIII, 1883.

## Reviews.

## OPHTHALMOLOGY AND THE NURSE.

WE have nothing but commendation for the excellent book on ophthalmic nursing by Mary Mason Springgay.<sup>1</sup> It is written by a practical nurse, experienced in eye work and besides being sound on general principles it contains many little intimate touches which denote the highly trained woman. For instance a sympathetic chord is struck in most of us when the writer complains of the bed maker who puts all the blankets below and leaves the patient's shoulders and neck to freeze. But how tragic for the cataract patient whose hand, tugging at the bed clothes, slips and collides with his wounded eyes.

Short chapters devoted to eye drops and their action, dressings and bandages, diseases of the eye, the patient before operation, anaesthetics, the operation theatre, are so uniformly excellent that the most carping critic would find it difficult to ply his trade. The advice to give a good meal to patients who are about to have cocaine anaesthesia is at least debatable; it is at times advisable or even necessary to switch off to a general anaesthetic. The operations described in the remaining chapters are well chosen and explained just as they should be to nurses.

<sup>1</sup> "Ophthalmic Nursing," by Mary Mason Springgay; 1925. London: Methuen and Company, Limited. Crown 8vo. pp. 133, with illustrations. Price: 5s. net.

## The Medical Journal of Australia

SATURDAY, MARCH 13, 1926.

### The Medical Services of the Commonwealth.

THE Commonwealth of Australia employs a very large number of medical practitioners for a variety of services. All these services have the purpose of improving the health of the people. In addition the Defence services have the object of assisting in the general organization necessary for the protection of the vast Australian continent for the British Empire. The main considerations of all public services are efficiency and economy, but the former may not be sacrificed for the latter. Unfortunately departmental service is often unsatisfactory on account of the absence of competition between its members and the lack of initiative. Moreover the enormous expense entailed in the upkeep of an efficient Navy, Army and Air Force in time of peace has led to wholesale reductions in numbers, so that the machine is becoming more or less useless for its essential function, namely to act at once in emergency. The Royal Commission on Health was asked to consider the advisability of coordinating the medical services of the Commonwealth in regard to matters affecting public health. This task is an extremely difficult one. It would have been worse than foolish had the Commissioners ignored the economical aspect, for their recommendations would have been impracticable. It therefore became necessary to take into consideration what the Commonwealth Government is prepared to do at the present time and to consider whether any practical suggestions can be made to improve the effectiveness of the several services without postulating any material change in the policy or political control of the Government. In these circumstances the first point to be decided is whether greater efficiency can be attained by coordination, amalgamation or transfer of the medical services to fewer independent authorities. It appears that at the present time there are nine authorities. The total number

of whole-time medical officers employed by these authorities is 116 and of part-time medical officers 335. In addition there are 1,698 auxiliary, unattached and reserve officers. It would be logical to place all these services under one authority, since their primary function is the preservation of health. But before such a proposal should be made, it would be necessary to arrive at the conclusion that in one medical service there would be greater efficiency than in nine. The larger number of members of the service would render it possible for the chief of the service to give the individual medical officers opportunities of undertaking different duties from time to time and of proving their special ability in varying conditions. To some extent the same could be effected in coordinated services. It is unlikely that the spirit of competition would be introduced into the larger service, unless at the same time promotion were made contingent on achievement rather than length of service. Departmental red tape and political consideration tend to prevent such a reform. On the other hand the Commissioners are apparently of opinion that efficiency suffers when the service is very small.

The Federal Committee and this journal advocated a few years ago the amalgamation of the Defence medical services, on the ground that such an expedient would increase efficiency, would lend itself more readily to emergency expansion and would be economical. The Director-General of Medical Services, however, is of opinion that amalgamation of the three services would be fraught with administrative difficulties and that a compromise would be preferable. He has suggested that the Naval, Military and Air Force Medical Services should be under the control of one Director-General of Medical Services, but that the three services should be kept distinct and be placed under a subdirector who should have power to act independently in emergency. The Commissioners have accepted this advice; indeed, any other decision would have been unwise, since the Director-General of Army Medical Services is obviously the best judge in regard to matters of administration.

The work of the Repatriation Department is peculiar in certain respects. Although it is purely

work directed to the combating of ill-health, it resolves itself largely into a control of the degree of incapacity of those who bear the signs of war service. This means that the medical service of the Repatriation Department is used to measure the obligation of the Government to the men whose earning capacity has been restricted as a result of their having risked everything for the sake of their country. The work might be controlled by the Department of Defence or by the Department of Health, but the Commissioners find that it is doubtful whether any advantage would be gained by this transfer. They suggest that the three departments should cooperate with one another, so as to increase their respective utility. It must be remembered that the activity of the Repatriation Department will gradually lessen and in due course cease altogether.

The last question raised in connexion with this part of the reference of the Royal Commission is far less difficult to answer. It is whether or not the Health Department should assume control of all the civil work, including the health control of the Federal capital, the Northern Territory, Norfolk Island, Papua and the mandated territory of New Guinea. The primary and chief objective of all this work is the improvement of the health of the community. It is undoubtedly extravagant and conducive to unsatisfactory results to have the services split up and subjected to five separate authorities. At the present time a considerable amount of coordination is needed between the medical services of the Health Department and those of the Home and Territories Department and is actually being carried into effect. The Commissioners do not hesitate in recommending a transfer of all the civil medical services to the Department of Health. In commending this suggestion, we should wish to add that if it be feasible, it would be of great advantage to emancipate the civil medical services from political control and to introduce a system of service record in order that promotion may be effected according to merit and not merely as a result of length of service. It appears to us that the recommendations of the Royal Commissioners are to some extent compromises dictated by expediency and wisdom.

## Current Comment.

### SPONTANEOUS RUPTURE OF THE HEART.

RUPTURE of the heart is commonly described in textbooks as a rare event associated with fatty degeneration or infiltration of the heart muscle. Reference is generally made to the findings of Quain who in 1872 described fatty degeneration in seventy-seven among one hundred cases collected by him. The condition is described as being more rarely due to acute softening following embolism of a branch of the coronary artery or to suppurative lesions of the myocardium. Some authors hold that spontaneous rupture usually occurs in a heart which is the site of chronic aneurysm. It would be expected that dilatation would precede rupture, but this is by no means always the case. Mackenzie reported a case of rupture of a heart whose walls were so thin that in one area practically only endocardium and pericardium remained, but in which no dilatation was present.

Dr. E. B. Krumbhaar and Dr. C. Crowell have recently studied the question of spontaneous rupture of the heart.<sup>1</sup> They set out to show that the common diagnosis of fatty degeneration as a cause of rupture is usually incorrect, that rupture is a condition chiefly associated with old age and that it is nearly always due to coronary disease. They relate in detail twenty-two hitherto unpublished cases and analyse six hundred and thirty-two cases collected from the literature. In their own series of twenty-two cases coronary sclerosis and thrombosis with myocardial fibrosis and necrosis occurred in nine instances, coronary sclerosis and thrombosis with myocardial fibrosis only were found in two instances, coronary sclerosis only with myocardial fibrosis and necrosis was found in five instances, coronary sclerosis only with myocardial fibrosis was found in two instances and no evidence about the condition of the coronary arteries was forthcoming in the remaining four cases. Most interest will naturally be attached to the findings in the four cases in the last mentioned category. In the first of these, although no histological report accompanied the autopsy findings, a diagnosis of fatty degeneration was made. Dr. Krumbhaar and Dr. Crowell point out that the paucity of evidence makes it impossible to say whether the condition was really fatty degeneration or an infarct following occlusion of the coronary artery. In the second case the apex of the heart was found to be firmly adherent to the parietal pericardium by fibrous adhesions. On the removal of fibrin two ragged openings were found extending through copious fat into the cavity of the left ventricle. The coronary arteries were not mentioned. On histological examination much fragmentation and segmentation and perinuclear pigmentation were found and these changes were more prominent in the right than in the left ventricle. A diagnosis of brown atrophy

<sup>1</sup> *The American Journal of the Medical Sciences*, December, 1925.

was made. Dr. Krumbhaar and Dr. Crowell point out that as the section examined was obviously not taken from the neighbourhood of the rupture, it is not possible to say what was the condition of the myocardium at this point. In their opinion the apical adhesion suggests an organized infarct and this in turn suggests coronary disease. They hold that the occurrence of further coronary occlusion with rupture of the resulting anaemic infarct is at least as probable as any other explanation. In the report in the third case the only information given is that several small tears were found in the left ventricle, some of which extended through into the cavity. No details of the condition of the heart were given. In the fourth case a jagged tear was found in the wall of the left ventricle. On examination of the muscle fibres fatty degeneration was found together with either central loss of transverse striae or complete loss of striation with granular degeneration. The comment made on this case is that it seemed more likely to be due to fatty degeneration than any of the others, but that in the absence of any information about the coronary arteries the question must be left undecided.

In their investigation of the underlying cause of rupture Dr. Krumbhaar and Dr. Crowell analysed the pathological reports in three hundred and seven cases in which they were available. The result is interesting. In one hundred and fifty-one reference is made to the coronary arteries and in one hundred and fifty-six they are not mentioned. In the first group coronary thrombosis was present in seventy-four instances, definite coronary disease with various myocardial lesions was present in sixty-eight and the coronaries were approximately normal in nine. In the group of sixty-eight mentioned in this category coronary disease was sufficiently severe in thirty-two to cause definite thinning of the ventricular wall or acute or chronic myomalacia; coronary disease was associated with fatty degeneration in twelve. In discussing the group of one hundred and fifty-six cases in which the coronary arteries were not mentioned, Dr. Krumbhaar and Dr. Crowell point out that fatty degeneration was a very popular term a generation ago. It was based on gross inspection only and was probably used to describe acute infarction as well. In this group it occurred in fifty-nine cases, while in the other group of one hundred and fifty-one cases it was found nineteen times. In seven of these nineteen it was associated with coronary thrombosis and twelve times with other forms of coronary disease. Although no mention was made of the coronary arteries, the term "ulceration" was used in connexion with eight cases and this condition is regarded as possibly including some cases of infarction; in twenty-three the ventricular wall was described as being much thinned and this condition is regarded as at least approximating cardiac aneurysm following coronary disease. In forty-one cases no cause for rupture was assignable and in four the heart musculature was said to be normal. Dr. Krumbhaar and Dr. Crowell point out that

without adequate histological examination this statement is of little value. They accept Quain's dictum that rupture of the heart never occurs spontaneously when the heart is healthy.

Another point brought out by the investigation is worthy of notice. In the literature cases of rupture while the patient is asleep are recorded. A history of exertion as an exciting cause was frequently forthcoming. It might be supposed that during sleep the heart musculature is subjected to no unusual strain. MacWilliams has shown that during dreams or restless sleep changes in the cardiac rhythm and in the blood pressure occur, the latter may increase in amount from twenty to thirty millimetres of mercury.

It is not proposed to allude to the clinical observations of these two observers on rupture of the heart; these are the least important. In their conclusions they point out several facts which should be remembered. In the first place they found that functional weakness can be manifested before the appearance of any signs of structural change. Moreover, coronary thrombosis may occur without signs or symptoms, considerable myocardial necrosis may occur without coronary thrombosis and following coronary thrombosis the myocardium may appear normal at autopsy, but on histological examination it may give evidence of considerable necrotic and infiltrative change.

#### MEASLES.

In our issue of November 21, 1925, reference was made to the claim by Dr. Ruth Tunnicliff that the Gram-positive, green-producing diplococcus described by her has an aetiological significance in regard to measles. Dr. Tunnicliff has carried on her investigations and has injected goats with this organism in order to test the protective power of their serum.<sup>1</sup> Goat serum was used rather than horse serum on account of the danger of sensitization with horse serum if also used in diphtheria and on account of "a general impression that goat serum is not toxic to man." It was found that the serum of a goat convalescent from the injection of green-producing measles diplococci protected ten rabbits against subsequent inoculation of infective material from human and rabbit measles. Goat serum was then used in human patients and the results compared with those obtained by using serum of convalescent persons. The results suggested that convalescent goat serum is as effective as serum from convalescent persons in preventing measles. Dr. Tunnicliff concludes that, although immune goat serum has been used in too few cases to warrant the forming of any definite conclusions in regard to its protective power, further investigation is indicated, especially with serum of more highly immunized goats. Her work in this direction will be watched with interest. It may lead to the definite determination of the causative organism.

<sup>1</sup> *The Journal of Infectious Diseases*, January, 1926.

## Abstracts from Current Medical Literature.

### MEDICINE.

#### Sprue.

B. K. ASHFORD (*Annals of Clinical Medicine*, July, 1925) gives his experiences of sprue in Porto Rico. Symptoms of indigestion and diarrhoea and nervous symptoms are present at the onset. Loss of weight, highly acid saliva and a burning in the tongue also precede the severe symptoms such as diarrhoea, offensive stools and dyspepsia and flatulence. Sooner or later the tongue becomes red and sore especially at the edges, it eventually becomes small, tough and smooth. Stools become light in colour, copious, frothy and frequent. They contain a great excess of fat. Epigastric pain, meteorism and vomiting are common symptoms; emaciation may become extreme. A blood picture resembling that of pernicious anaemia is frequently found. Tongue scrapings and the faeces manifest *Monilia psilos* in 75% of cases. Treatment consists in a diet of lean meat, milk, eggs, fresh vegetables and fruit. Sugar and cereals are forbidden. A vaccine of killed cultures of *Monilia psilos* (1% in normal saline solution) in doses of 0.1 cubic centimetre up to one cubic centimetre weekly for ten weeks seems to expedite recovery.

#### Beri Beri From a Diet of Raw Starch.

E. J. KEPLER (*The Journal of the American Medical Association*, August 8, 1925) reports the unusual case of a negress who contracted the habit of eating raw starch in large quantities varying from five hundred to a thousand grammes a day. The regimen was adopted on the advice of certain friends as part of the after-treatment of a miscarriage and also in the hope that the starch might produce whiteness in the patient's skin. For almost three years, raw starch was almost her sole food. At the end of that period, the negress presented all the signs and symptoms of beri beri. A diet of autolyzed yeast caused a rapid improvement in the patient's condition, but treatment had to be continued for a period of three months.

#### Protein as a Cause of Nephritis.

N. EVANS AND E. H. RISLEY (*California and Western Medicine*, April, 1925), while agreed upon the important rôle played by the infections, various toxæmias and certain mineral poisons in the production of true nephritis, are convinced that nephritic changes may be produced in animals by feeding for long periods on a dietary containing excessive quantities of protein. These morbid changes were previously produced by Longcope in a series of experiments conducted in 1913. The

authors used white rats for their experiments and the diet consisted of meat, casein, peanuts, green vegetables, wheat gluten and soy beans. No kidney changes were found in the control animals living upon green vegetables and grain. The rats fed upon a high protein ration developed nephritis without exception. Evans and Risley believe, therefore, that their experiments confirm the previous work of Longcope, Newburgh, McCollum and others and that a low protein diet should be maintained in the prophylaxis and therapy of nephritis. They cannot but conclude that the highly protein diet of the people dwelling in temperate climes is a definite aetiological factor in the production of nephritis.

#### Albinismus.

A. G. ODELL (*Clifton Medical Bulletin*, March, 1925) summarizes the literature dealing with albinism. Albinos occur in every race in the world and in most forms of animal life. White rats and rabbits are far from uncommon, white crows and robins are often seen and in some parts of the Orient the white elephant is worshipped. Stellwagon has defined the disease as a congenital absence, partial or complete, of the normal pigment of the skin, hair and eyes. The cause of the condition is uncertain. It may be an atavistic return on the part of the individual to an albino race of the past; it may be due to the congenital absence of the melanin group of pigments, a congenital condition in which recessive traits of Mendelian character appear. The laity have a firm belief that the disease is due to prenatal impressions. The complete albino has thin white skin, easily burnt by the sun. His hair is fine, white and silky. The eyes have pink or light blue irides and red pupils. Photophobia is always present, so that the albino has a peering look and nystagmus is generally noticed. Astigmatism is a common defect. The general physique is delicate and fragile. *Post mortem* reports of the condition are rare, since albinism is not a fatal disease; but in the case of one albino who died in 1910, the brain, the hair, the uvea, the internal ear and the sclera were all found unpigmented. Treatment there is none, except the giving of dark glasses to shield the eyes and the correction of astigmatism.

#### Lack of Oxygen.

C. W. GREENE (*The Journal of the American Medical Association*, August 29, 1925) discusses the lack of oxygen in health and disease. One hundred cubic centimetres of normal arterial blood contain 18.5 cubic centimetres oxygen, 0.36 cubic centimetre in simple solution, the rest in loose chemical combination with haemoglobin. An excess of oxygen has no advantage for the normal individual since a 60% oxygen tension in the air breathed increases the oxygen in the blood by only 1.52 cubic centimetres

per 100 cubic centimetres of blood. In experimental anoxæmia and in the oxygen deficiency of disease the medullary centres are stimulated and bring about increased rate and amplitude of respiration, thus maintaining the alveolar oxygen at as high a level as possible. If, however, the inspired air contains less than 6% by volume of oxygen, an anoxæmic crisis occurs, respiration declines, delirium, unconsciousness and coma follow and the pulse rate falls. Oxygen deficiency is an important factor in anaesthesia produced by nitrous oxide and ether. Indeed the anaesthesia produced by nitrous oxide is very closely related to the unconsciousness produced by simple anoxæmia. The arterial oxygen in deep ether anaesthesia may fall as low as 6%, hence the danger in reduction of oxygen (air) during induction of anaesthesia by this method. In pneumonia the alveolar capacity is greatly reduced by consolidation or exudate, in oedema and when rales (moist) are present there are also fewer alveoli available to supply the blood with oxygen, hence administration of oxygen (40% to 60% by volume of the inspired air) enables the remaining normal alveoli to supply more oxygen to the blood. Though the resultant increase of oxygen in the blood is only 5%, great improvement in colour and pulse occurs and respiration becomes easier. Guedel's head and face tent is the best for bedside administration of oxygen. In heart failure oxygen is not so beneficial because the cause of the symptoms is the reduction of the minute volume of blood carried to the tissues which therefore are not sufficiently oxygenated, the blood is well oxygenated in the lungs, but the quantity of blood reaching the tissues is not enough for proper oxygenation. Supplying oxygen by mouth will not remedy this. Similarly in anaemia there is sufficient oxygen available, but the haemoglobin is defective and is unable to carry it to the tissues.

#### Treatment of Asthma.

P. VALLEY-RADOT, P. BLAMONTIER AND P. GIROUD (*La Presse Médicale*, December 16, 1925) record the results of treatment of asthma, hay fever and spasmodic rhinorrhœa with intradermal injections of peptone solution. A 50% solution of de Witte's or Chassaigne's peptone in water was prepared, put up in glass ampoules and sterilized at 110° C. The injections were made daily with a fine needle into the dermis over the deltoid or outer side of the thigh. Each injection produced a papule which gave rise to an urticarial wheal with pseudopodia. The next day a red nodule only could be felt and after eight days only a brown mark remained. Occasionally a vesicle formed and rarely a small ulcer which quickly healed. In a few cases a red indurated area formed around the papule. Twenty injections were given in each case. If any considerable local reaction occurred, a smaller dose was given next time. The first dose was

0.1 cubic centimetre, then 0.2 and 0.3 cubic centimetre; the latter dose was never exceeded. There was no general reaction such as follows intravenous injections as a rule. No result followed unless the injections were made into the dermis. Of fifty-seven cases of hay fever amelioration or disappearance of symptoms occurred in forty-two and in some of these there were only mild attacks the following year. The best results were obtained when treatment was begun at the onset of the hay fever. In asthma, uncomplicated by chronic bronchitis or emphysema, considerable improvement followed the injections, but usually the good result lasted only one or two months. A repetition of the injections caused a second diminution or cessation of attacks. Spasmodic rhinorrhœa was relieved or ceased temporarily in eleven out of thirteen cases, but the attacks returned after some weeks. In sixteen out of twenty-five patients the leucocyte count fell and the fall was from 1,700 to 3,100 per cubic millimetre after the injections.

#### Nephritis.

F. M. ALLEN (*The Journal of the Indiana State Medical Association*, December, 1925) discusses the aetiology and treatment of nephritis, hypertension and arteriosclerosis. The primary lesions in nephritis appear to be in the small blood vessels. These lesions cannot be reproduced experimentally, but most of the symptoms of nephritis can be reproduced by partial nephrectomy. In the urine of an animal subjected to this operation albumin, red cells and casts are usually absent, but they can be made to appear by feeding with protein and salt. Nitrogen retention occurred and uremia and oedema can be produced in the same way. Protein and salt feeding cause overstrain of the remaining kidney substance and give rise to practically all the symptoms of nephritis in human beings. Hypertension has a familial incidence, it probably arises from injuries of the small blood vessels due to infection or intoxication. Overwork and nerve strain are not such evident aetiological factors as suggested. There is evidently a renal element in the causation of hypertension; it occurs in some animals which have undergone nephrectomy. The vascular lesions in hypertension are widespread; the condition is often transitory at first and this may well be due to vascular spasm; such spasm is evident in retinal arteries at times and appears to give rise to brief apoplectiform seizures in some cases. Usually hypertension is a progressive condition. Volhard holds that spasm of larger arteries cause ischaemia in the capillaries with resultant endothelial proliferation and obliteration of the capillaries. If, then, spasm can be prevented, the progress of the disease may be stayed. Clinically a salt free diet arrests its progress providing it is not too far advanced. Arterio-

sclerosis is not affected by protein restrictions. Infections or intoxications appear to play a large part. Sclerosis of larger arteries is almost solely toxic or infective in origin; that of the smaller arteries is usually accompanied by hypertension and its cause is largely governed by functional influences. The substance in the diet that is responsible for the secondary pathology is not protein, but salt. In treatment primary foci should be eliminated and overstrain prevented by a diminution of protein intake to avoid nitrogen retention and by removal of salt from the diet to prevent arterial spasm.

#### Diabetic Coma.

W. W. PAYNE AND E. P. POULTON (*The Lancet*, September 26, 1925) record eleven cases of diabetic coma. The patients were under thirty years of age; a febrile disturbance preceded the onset in several instances, vomiting and the omission of "Insulin" were noted also. Oliguria, albuminuria and a high blood urea content were noted in six cases and in these the excretion of sugar and acetone was low at the time. Apparently the renal element played a large part. The patients who had omitted to take "Insulin" were fat and the upsetting of carbohydrate metabolism by the withdrawal of "Insulin" might have led to uncontrolled production of ketone bodies. The treatment given was twenty to forty units of "Insulin" every four hours and repeated blood sugar estimations. Half a litre of fluid containing dextrose 3%, 0.5% sodium bicarbonate solution, potassium chloride 0.05% and calcium chloride 0.03% was given orally or by stomach or nasal tube every hour until an abundant flow of urine occurred. "Insulin" was continued until two-hourly specimens of urine were sugar and ketone free.

#### Intestinal Diverticula.

E. S. SPRIGGS AND O. A. MARXER (*Quarterly Journal of Medicine*, October, 1925) report some investigations into the frequency of intestinal diverticula and the symptoms arising therefrom with the results of treatment. Among one thousand consecutive radiological examinations of the gastrointestinal tract diverticula were recognized in one hundred and forty-three cases. Most common in the colon and duodenum, they were found in all parts of the bowel except the stomach and they were often numerous. They varied from the size of a small pea to that of a cricket ball. A prediverticular stage was recognized, later diverticulosis and rarely diverticulitis, an inflammatory stage. The condition was generally associated with infection in some other part of the body, apical sepsis of the teeth, appendicitis, cholecystitis being fairly common, especially the first named. The condition was apparently not congenital, but appeared to be due to degenerative or inflammatory processes. Haemolytic streptococci were

frequently found in the faeces, especially in the prediverticular stage, but they were also found in many cases in which no diverticula were demonstrated. Abdominal pain or discomfort, flatulence, constipation or diarrhoea were present in eighty-nine instances and in the absence of other demonstrable causes these symptoms were attributed to the diverticula. Tenderness over the site of diverticula was found in a few cases. In fifty-four there was no apparent relationship between the patient's symptoms and the diverticula. Treatment consisted of the administration of liquid paraffin four to thirty cubic centimetres twice a day, a fish, egg, milk, cream, vegetable and fruit diet, colon douches with saline solution, with rest and exercises or massage as indicated, abdominal massage was avoided. Acute inflammation or obstruction required surgical treatment. The teeth were attended to and tonics or carminatives employed when necessary. In most cases patients were relieved of their symptoms. A continuance of light diet and of liquid paraffin was advised. Surgical treatment was not recommended except as mentioned above, there was no reason to suppose that fresh diverticula would not occur, hence excision of part of the bowel was contraindicated.

#### Malarial Treatment of Syphilis.

G. SCHERBER (*Wiener Medizinische Wochenschrift*, November 5, 1925) considers that during the malarial treatment of syphilis the heart must be carefully observed. Contraindications to its use are uncompensated cardiac lesions, myocardial degeneration and a more advanced age than fifty-five. Ominous signs noted during treatment were hiccough, severe intestinal catarrh, endocarditis and glycosuria which was preceded by severe headaches. The malaria was cured with quinine or better still by "Salvarsan." It must be understood that severely damaged nervous tissue cannot be replaced by this treatment, nor will every focus of infection be destroyed. The success of this method depends on the energetic and early treatment of all primary and secondary lesions by the usual means of treatment. Malarial injections should be reserved for the later nervous manifestations.

#### Hæmorrhages in the Macula Following Blood Transfusion.

L. SALLMANN (*Wiener Medizinische Wochenschrift*, November 14, 1925) describes three patients with pernicious anaemia who suffered from hæmorrhage of the macula following blood transfusion. No cerebral changes were observed in one case in which a *post mortem* examination was performed. Reliable statistics of the frequency of this complication are not available, as it is not a routine practice to examine the fundi before and after transfusion.

## British Medical Association News.

### SCIENTIFIC.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held in conjunction with the Melbourne Paediatric Society at the Children's Hospital, Carlton, on November 11, 1925.

#### Hydatid Disease in Children.

DR. H. DOUGLAS STEPHENS discussed some points connected with hydatid disease in three children.

The first, a boy, aged four years and nine months, was first seen by Dr. Stephens in April, 1925. The child had been sent to him with the provisional diagnosis of *empyema thoracis*, but the history of an illness simulating pneumonia and accompanied by "hives" in June, 1924, followed by a similar illness six weeks later, had raised the suspicion of the presence of a hydatid cyst in the left lung. Early in February the boy had been admitted as an in-patient to the Colac General Hospital, suffering from pneumonia. He had been invalided since that time with cough, fever and rapid respiration.

On physical examination it was noted that the cardiac apex beat, although diffuse in character, was not displaced. Percussion dulness was pronounced over the upper portion of the left side of the chest on both anterior and posterior aspects; the breath sounds in these regions were heard but faintly.

An examination of the blood revealed a total leucocyte count of 52,000 per cubic millimetre, of which 62% were neutrophile polymorphonuclear cells and only 2% eosinophile cells.

Miss Williams, of the Walter and Eliza Hall Institute, applied by the complement fixation the test for hydatid disease and obtained a reaction with both the Harrison and the ice-box methods. The Casoni intradermal test supplied confirmatory evidence of the existence of hydatid disease. A skiagram of the chest was also shown.

On April 16 1925, the contents of a large abscess in the upper lobe of the left lung had been evacuated. They consisted of a large collapsed cyst and approximately three hundred cubic centimetres of purulent, offensive fluid in which hydatid hooklets were demonstrated.

Subsequent to the operation the boy had made very good progress and on May 5 had been sufficiently well to be transferred to the Convalescent Cottage.

The second patient shown by Dr. Stephens was a girl, aged ten years, who had been subject to recurrent attacks of abdominal pain and constipation. The attacks had recurred about every four or six months and relief of the pain had followed evacuation of the bowels. The child was said to have been affected by a "stoppage of the bowels" at the age of three years, but apparently the symptoms had been relieved by medicine and enemata. Palpation of the abdomen disclosed the presence of several hard, rounded masses, situated deeply and placed immediately to the left of the umbilicus and in the right iliac fossa. Prior to operation the total number of leucocytes was 24,600 per cubic millimetre; the neutrophile polymorphonuclear cells comprised 70% and the eosinophile cells 2.5%.

On February 18, 1925, several hydatid cysts were removed intact from the omentum and a large one from the broad ligament on the left side. On the day following operation the leucocyte count was 23,000 per cubic millimetre, of which 29% were eosinophile forms. One week later eosinophile cells comprised 15% of a total leucocyte count of 18,000 per cubic millimetre.

A very strong complement fixation reaction was obtained with the serum two days after the operation, thirty-five minimal haemolytic doses of complement being deviated; a reaction to the Casoni test occurred very promptly in the immediate phase, but was not apparent in the delayed phase.

Dr. Stephens's third patient was a girl, aged seven years, who first came under observation in October, 1924. When she presented herself at the Out-Patient Department

her general aspect and physical signs were such as to suggest an empyema on the right side. Her respiration was hurried and laboured and her temperature was 39.5° C. (103° F.). The percussion note was very dull over an extensive area of the right lung on both anterior and posterior aspects. It was observed also that the lower margin of the liver reached a point five centimetres below the costal margin.

On October 13, 1925, a large suppurating hydatid cyst was evacuated from the right lobe of the liver. Ten days later the complement fixation and Casoni tests were applied, a reaction being obtained to both. One week after the operation the total leucocyte count was 9,850 per cubic millimetre; of these only 2% were eosinophile cells.

#### Malignant Disease of the Kidney.

Dr. Stephens also presented three children, all boys, aged respectively two years, four years and four years, upon each of whom he had performed nephrectomy for the eradication of a malignant tumour of the kidney. He exhibited the pathological specimens, all of which had been reported by Dr. Reginald Webster as examples of the embryonal tumour of the kidney known as the Wilms's tumour.

In two of the children the first sign had been haematuria; in the third there had been no passage of blood or urinary disorder of any description. In all three children an abdominal swelling which increased rapidly under observation, had been the principal feature. He had removed the large tumours exhibited through a lumbo-ilio-inguinal incision in each instance and had arranged for postoperative deep X ray therapy. The operations had been performed in December, 1924, March, 1925, and August, 1925, and there had been no indication of recurrence in any of the children.

Dr. Stephens also demonstrated from a number of pathological specimens with the aid of which he discussed a wide range of malformation and anomalies in the urinary tract in children.

#### Acute Arthritis of the Knee Joint.

MR. RUPERT DOWNES, C.M.G., showed three children for whom he had adopted different measures in the treatment of purulent arthritis of the knee joint.

Twelve days before admission in September, 1925, the child had sustained an injury to the knee joint. On the following day the joint had been very swollen and painful. Various impetiginous sores had been noted about the legs. Forty cubic centimetres of pus containing *Staphylococcus aureus* were withdrawn from the cavity of the joint by aspiration. The joint had then been washed through with a 1:4,000 solution of perchloride of mercury. The only remaining disability was a slight degree of limitation of flexion of the knee joint.

The second child had sustained a penetrating wound of the knee joint in December, 1924. Two days later the joint had been much swollen. Aspiration had been performed twice at intervals of three days, after which the effusion of the joint subsided.

The third patient had been admitted to the hospital on August 6, 1925, on account of pain, swelling and loss of movement in the right knee joint of two days' duration. The arthritis had supervened on broncho-pneumonia. Aspiration had been carried out immediately, but the joint had again become tense with effusion. Eight days after the child's admission the capsule of the joint had been opened, the cavity washed out with 1% solution of mercuric chloride and the incision closed by suture. No further active measures had been found to be necessary. Gram-positive cocci had been identified in the pus, but attempts to cultivate them had failed.

#### Renal Colic Due to Aberrant Renal Artery.

MR. DOWNES discussed the case of a girl, aged nine years, who for two years had suffered attacks of pain in the loin. The pain had been very severe and had frequently been accompanied by vomiting, but there had not been any haematuria, frequency of micturition or

dysuria. Microscopical and bacteriological examination of the urine had failed to disclose any evidence of diagnostic importance. Mr. Downes exhibited a pyelogram from which it was seen that there was no passage of the opaque fluid (sodium bromide) beyond the second lumbar vertebra. Operation had disclosed a large vein, a small artery and a band of fibrous tissue running into the pelvis of the kidney and constricting the ureter. These structures were divided between ligatures and there had been complete relief of symptoms since the operation.

#### Hydronephrosis Due to Kinked Ureter.

Mr. Downes also showed a boy, aged twelve years, who had been subject to attacks of pain in the left loin for a period of two years. It had been noticed that the pain was induced by jolting, but it was not associated with any frequency of micturition or scalding. Mr. Downes demonstrated from a pyelogram that there was no passage of the opaque fluid beyond the second lumbar vertebra and that the ureter distal to this point was dilated. Operation had revealed a lobular kidney, a dilated renal pelvis and a kink at the uretero-pelvic junction with a bridle of mucous membrane internally. Relief of symptoms followed the performance of plastic pyelo-ureterostomy.

#### Actinomycosis of the Parotid Gland.

Actinomycosis of the parotid gland was illustrated in a boy who had been under observation since May, 1925. When he had first attended the hospitals, he had stated that he had been kicked on the left side of the face four weeks previously. Swelling in the region of the parotid had followed the injury. The swelling had been incised from within the oral cavity and what appeared to have been an alveolar abscess had been opened. Glaucous fluid had been evacuated, but no bacteria nor granules suggesting the presence of the ray fungus had been discovered. Fluctuant areas developed in the swollen and indurated tissues. No pyogenic cocci, tubercle bacilli nor actinomycosis had been found in spite of repeated examinations of the fluid obtained by aspirating successive softened spots. On August 27 the boy himself had drawn attention to the presence of some "pin-heads" for which he had been told to watch, in the débris expressed from one of the softened swellings. These had been found to be colonies of the ray fungus. On July 7 treatment by means of iodide of potash had been instituted. At the outset 1.8 grammes had been administered each day, but this amount had been gradually increased and since September 3 the boy had been taking over ten grammes per day without any apparent ill effect. There had been much improvement in the lesions.

#### Fracture of Elbow Followed by Wrist Drop.

Mr. Downes's next patient was a child who had sustained four months previously a supracondylar fracture of the humerus with much dorsal displacement of the lower fragment. The limb had been extended in a Jones's arm splint. Six days later the splint had been removed and the child permitted to carry the arm flexed to a right angle in a sling. He had then been sent to the Convalescent Cottage where he had remained ten days. On his return three weeks after removal of the splint wrist drop had been noted. The forearm had therefore been placed on a "cock-up" splint and the dorsal muscles of the forearm had recovered their function in the course of eleven weeks. The range of movement at the elbow joint of from 65° to 140° had been regained.

#### Volkmann's Paralysis.

In conclusion Mr. Downes showed a child with Volkmann's paralysis. The child had sustained a green-stick fracture of the radius and ulna in December, 1922. Immediately following the injury the limb had been placed on an anterior splint which extended from the axilla to the fingers, a short dorsal splint having been applied to the forearm. Two days later the circulation in the fingers had been good. Five days after the accident the splints had been taken off and it had been observed that the limb was extensively bruised. In December, 1924, the

hand and fingers had been flexed and pronated and the thumb strongly adducted. Scars had been present on the wrist and palm.

In January, 1925, Mr. Downes had divided the contracted adductor muscles of the thumb, performing a plastic operation for the relief of the skin contractures. The thumb had then been placed in an extension splint. Since January, 1925, the patient's power of supination and of extending the hand and fingers had improved very slowly in splinting designed to stretch the finger muscles.

Several children suffering from various deformities were shown by Mr. MERVYN STEWART.

#### Poliomyelitis: Paralysis of the Muscles of the Shoulder Girdle.

A boy, aged twelve years, had contracted poliomyelitis in 1918. When first examined by Mr. Stewart in July, 1925, the patient had no power in any of the muscles acting on the shoulder joint proper of the left side. The deltoid, *spinati*, *teres*, *pectoralis* and *subscapularis* muscles had been completely paralysed, but a good degree of power had been present in the *levator scapulae*, rhomboids, *serratus anterior* and *trapezius* muscles. The biceps and triceps had very diminished power. Arthrodesis of the shoulder joint had been performed. At the time of the meeting it was seen that good bony union had been secured. He had a useful limb and could feed himself with the left arm.

Mr. Stewart's second patient was a girl, aged five years, whom he had treated for extensive paralysis of the upper arm muscles, the result of poliomyelitis of two years' duration. The child had been fitted with a splint in which the limb was placed in a position of abduction combined with a degree of medial rotation. The mother had been instructed to remove the splint for one hour every morning and evening and encourage active movements. Since September, 1925, there had been a considerable recovery of power in the muscles of the shoulder girdle.

#### Apophysitis.

A girl, aged twelve years, had been troubled by pain in the left heel for two months. No signs had been detected by physical examination, but a skiagram of both feet yielded evidence of bilateral apophysitis (osteochondritis of the *os calcis*). The child had been engaged in stage dancing for the last two years and traction strain through the *tendo Achillis* as the result of toe dancing was suggested as the principal factor in the aetiology.

#### Poliomyelitis: Paralytic Talipes.

Mr. Stewart showed two children affected with paralytic talipes as a late result of poliomyelitis. The first child who had contracted poliomyelitis in 1918, had *talipes calcaneus* associated with a severe degree of fixed *pes cavus*. There was no power at all in the *tendo Achillis* and although the quadriceps and hamstring muscles were affected, the child was capable of a certain amount of voluntary flexion and extension of the knee joint. The affected limb was six centimetres shorter than that of the other side. Operation for the correction of the cavus deformity had been carried out on June 17, 1925, and six weeks later the limb had been placed in plaster of Paris in an endeavour to maintain as full a degree of plantar flexion as possible. The *os calcis* had been raised and a cork wedge incorporated in the plaster in order to maintain the bottom of the plaster plane with the ground.

#### Talipes Equinovarus.

Mr. Stewart discussed the correction of *talipes equinovarus* in a child whom he had first seen in September, 1925. The deformity had been the result of poliomyelitis contracted in 1920. There had been extensive involvement of the dorsiflexor and peroneal muscles, fixed cavus and varus deformity and contracted *tendo Achillis*.

On October 15, 1925, Mr. Stewart had operated for the correction of the *pes cavus* and *talipes varus*, but he had not dealt with the *talipes equinus*.

Mr. Stewart showed two other children whom he had treated for *pes cavus* and discussed the orthopaedic problems arising in another child affected with spastic birth palsy.

The operation for the correction of cavus and varus deformity was the same in each of the patients. Through an incision on the outer side of the foot running along the plantar edge of the *os calcis* the plantar fascia and the origins of the short muscles of the sole were stripped from the *os calcis* and the long and short plantar ligaments and the interosseous calcaneo-cuboid ligament were divided. Through an incision on the inner side of the foot, convex upwards, but not carried as far backwards as the danger zone below the *sustentaculum tali*, the superficial part of the plantar fascia was dissected from the *abductor hallucis*. After freeing this muscle, the operator worked across the foot from the inner to the outer side, keeping close to the bony arch all the way and divided all the vertical prolongations of the plantar fascia. After full correction of the deformity the incision on the inner side became almost horizontal. All tendons and all joint ligaments with the exception of those specified were left intact.

#### Chronic Pyelitis: Lavage of the Renal Pelvis.

Mr. J. T. Tait read notes concerning three children whom he had treated for chronic bacillary infection of the urinary tract by lavage of the renal pelvis.

The first was a girl, aged ten years, who for five years had complained of attacks of pain, evidently of the nature of colic, in the right hypochondrium and the epigastrium. She had suffered from occasional vomiting and impaired appetite. During and after the attacks of pain there had been a desire to pass urine; the act of micturition had been attended by scalding in the urethra. The urine had been turbid, very offensive, acid in reaction and heavily charged with pus cells, epithelial cells and bacilli. No diagnostic feature appeared in a skiagram of the urinary tract. Treatment consisting of the administration of alkalis and urinary antiseptics had been instituted, but at the end of eighteen months, although the symptoms had abated, there had been very little improvement in the pathological state of the urine.

Mr. Tait had performed cystoscopy under ether anaesthesia and had observed the appearances indicative of diffuse cystitis; both ureteric orifices had been swollen and injected and had emitted cloudy effluxes. Lavage of the renal pelvis with 1% solution of silver nitrate had been carried out at intervals. The condition had gradually improved until November, 1925, when the urine had been found to be free of pus and bacteria.

The child had no symptoms and its general health had improved.

In commenting upon the case of this child and two others of a similar nature, Mr. Tait drew attention to the long duration of the condition of chronic pyelitis, the vague general symptoms, the slight urinary symptoms and the failure of extended treatment by medicines and vaccines. Progress should be controlled by cytological and bacteriological counts.

#### Pathological Dislocation of the Hip Following Acute Arthritis Neonatorum.

Mr. C. H. Osborne presented a female infant, aged one year and twelve weeks. At the age of six weeks she had had an abscess on the left hand. Two weeks later she had become very ill and a swelling had appeared in the upper portion of the right thigh on its outer aspect. According to the mother's statement an operation for the drainage of a large abscess had then been performed. The scar had remained in the lateral aspect of the upper third of the thigh. Nothing further had been noticed until the child began to walk at the age of fourteen months when a limp had been detected; the disability which gradually had become more pronounced, had occasioned the child frequent falls and the gait had been of a lurching character.

When the child had been brought to the Children's Hospital in September, 1925, she had a decided limp, a rolling

gait, lordosis and prominence of the right buttock. The right lower extremity had been 4.3 centimetres shorter than the left. Telescopic movement of the limb had been detected and an examination had revealed that all movements at the hip joint with the exception of adduction were limited in range. The trochanter major had been defined on the dorsum of the ilium at a point well above Nélaton's line, but the head of the femur had not been palpated.

The clinical diagnosis of pathological dislocation of the hip following acute arthritis had been confirmed by radiological examination. The film disclosed absence of the head and neck of the femur, destruction of the acetabulum and evidence of a false acetabulum above the normal site, the great trochanter apparently articulating with the false cavity. On September 29, 1925, under general anaesthesia operation for the stretching of the adductor and hamstring muscles and manipulation of the hip joint was undertaken. The upper end of the femur had been felt slipping over the posterior lip of the acetabulum. A plaster cast had been applied to the limb in the Lorenz position. A skiagram taken through the plaster had revealed imperfect reduction of the deformity. Further manipulation had therefore been carried out and the upper end of the femur had come in contact with the original acetabular socket. It was proposed to keep the limb in the Lorenz position for several months and to permit walking in the hope that a new upper and posterior lip to the acetabulum would be developed.

#### Myositis Ossificans Traumatica.

Mr. Osborne's second patient was a boy, aged five years, who had been admitted to the Children's Hospital in June, 1924, when it had been stated that he had been limping with the left leg for three weeks and that he had complained of much pain in the region of the left hip joint. There was a vague history of a fall on to the right side a few days prior to the onset of the limp. In other respects the child had been well and had had no pyrexia. The left lower limb had been held in a position of slight flexion at the hip joint. There had been much limitation of movement at the joint on account of the pain. A skiagram taken at this time had revealed new bone formation arising from the superior surface of the neck of the femur, the medial and anterior aspects of the neck and the region of the small trochanter. The joint surfaces had appeared normal and no sign of fracture had been detected. For the ensuing ten months the child had been kept in a single Thomas's hip splint. A skiagram taken in April, 1925, had revealed diminution in the amount of bony outgrowth, but a greater degree of sclerosis in that which remained, situated on the anterior aspect of the neck and shaft of the femur. The serological tests failed to reveal either a syphilitic or a tuberculous infection.

In August, 1925, the patient had commenced to walk and from that time had had no limp or disability.

On examination in November, 1925, the affected limb had appeared normal. There was no muscular wasting or abnormality of gait. The range of flexion of the hip joint was 90° and the movements of extension and internal rotation were also limited. A hard irregular mass was palpable in the left inguinal region anterior to the upper part of the shaft and neck of the femur. The mass moved on rotation of the thigh and pressure over it occasioned the child pain.

Mr. Osborne exhibited a stereoscopic skiagram of the hips and pelvis and demonstrated a mass of osseous tissue which was defined as anterior to the neck of the left femur. By comparison with earlier films there was evident a still further diminution in the amount of new bone formation and the reduction in density of the shadow indicated progressive absorption. The new bone formation appeared to be in the short head of the *rectus femoris* muscle, in the capsule of the joint and in the ilio-psoas muscle at its insertion; it was suggested that the pathological condition was traumatic *myositis ossificans*. In view of the lack of symptoms and the radiological evidence of absorption no further treatment was indicated.

**Nævi Treated With Radium and Carbon Dioxide Snow.**

Dr. R. R. WETTENHALL presented several patients to demonstrate the result of treatment of vascular nævi by radium and by carbon dioxide snow. Under radium treatment the nævi rapidly became pale and less elevated. The treatment was painless and could be used for the youngest infants. The dosage must be small. It was advisable to "hasten very slowly" and not to overtreat. Nævi continued to grow paler after the cessation of treatment. Radium could be used where other methods could not be utilized with advantage. Patients were shown who formerly had had nævi of the eyelid, lip and labia. Dr. Wettenhall demonstrated the result of treatment in a child with an angioma of one foot. The foot had previously been larger than its fellow on account of the angioma extending through the thickness of the foot from the instep to the sole. It was becoming approximately the same size as the other foot. Other patients shown had been treated with carbon dioxide snow.

**Epidermolysis Bullosa.**

Dr. Wettenhall showed a child whose feet and legs had been blistered soon after birth. In other parts of the body blisters had developed as a result of slight trauma. The father had had the same condition.

**Keloid Treated With X Rays.**

Dr. Wettenhall's next patient was a girl, nine years of age, who had been burned on the neck with hot fat. A keloid had developed and this had been obliterated by means of a series of X ray exposures. The last treatment had been given fifteen months previously.

**Herpes Zoster Treated With X Rays.**

Dr. Wettenhall also showed a child with grouped vesicles and erythematous patches of *herpes zoster* on the right half of penis and scrotum and adjacent part of thigh. The eruption also extended on to the right side of the buttock and down the back of the thigh over the area supplied by the third sacral nerve. There was an isolated patch on the lateral side of the foot. The distribution was interesting. When pain was severe in *herpes zoster*, Dr. Wettenhall had found that it was relieved within twelve hours by the application of X rays. It was found that the vesicles became flaccid and their development was arrested.

**Psoriasis.**

In another patient psoriasis was present on scalp, arms and legs. Dr. Wettenhall stated that the eruption was of the guttate variety.

**Lupus Vulgaris.**

A boy, four and a half years of age, had enlarged glands of tuberculous nature in the neck. On the cheek there was a typical patch of *lupus vulgaris*, a relatively uncommon condition in Australia. Ultraviolet light was to be used in treatment.

**Verruca Plantaris.**

Dr. Wettenhall's last patient was a child who had had a papillary nodule in the heel some weeks previously. It had been tender to pressure and had caused the patient to walk on the other side of the foot. These warts were often mistaken for corns. They responded rapidly to radium. In this patient salicylic acid plaster had produced the desired result. The entire wart had come away.

**Juvenile Amentia.**

DR. A. P. DERHAM in association with PROFESSOR R. J. A. BERRY and MISS BARLING showed several patients selected to illustrate the association of amentia with various forms of physical defect and disease.

The first, a female child, eight years of age, provided an illustration of amentia of unstable variety associated with epilepsy. The child had formerly had *grand mal*, but more recently *petit mal*; the epileptic attacks had been completely controlled by the administration of "Luminal." This child was microcephalic, having a brain capacity of

1,105 cubic centimetres. The Binet intelligence quotient was 67 and the Porteus quotient 58. Professor Berry regarded her as a low grade ament. She was excitable, inquisitive, cruel, indecent and probably sexually precocious, but her behaviour had improved since her fits had been controlled by "Luminal." She was in the infant grade at school. There was no evidence of syphilis.

Mental deficiency in the second child was considered to be due to long standing deafness. The brain capacity, 1,155 cubic centimetres, was above the average, as was the physical development. The Binet and Porteus test quotients were each 72. The child had suffered from a bilateral chronic *otitis media* with otorrhoea and was at times almost completely deaf to ordinary speech. She was very backward at school, but was improving. In Professor Berry's opinion the mental retardation was due to deprivation of the sense of hearing and the child was probably capable of normal neurological development. The Wassermann test had failed to disclose evidence of syphilis.

In the third child the mental deficiency was associated with cerebral spastic diplegia (Little's disease), probably caused by a birth haemorrhage. The brain capacity was subnormal, 1,061 cubic centimetres, and the child was physically underdeveloped. The Binet and Porteus quotients were 66 and 47 respectively. The child's general appreciation of the affairs of everyday life and her behaviour in school were of a higher grade than would be suggested by her appearance. This often occurred in Little's disease. She was eleven years of age and in the infant grade at school. Professor Berry considered her to be physically and mentally retarded and a suitable subject for institutional treatment in a colony for mental defectives. There was no evidence of hereditary syphilis.

The fourth patient discussed by Dr. Derham was a boy aged fifteen years, whom he described as a microcephalic ament and congenital syphilitic. The boy was committed to the care of the Children's Welfare Department at the age of fourteen for house-breaking. He manifested decided criminal tendencies when living in ordinary surroundings, but was easily controlled and relatively reliable when living in the atmosphere of an institution. He had the physical stigmata of interstitial keratitis and partial deafness, the impaired hearing being due probably to a syphilitic nerve lesion. He was of particularly villainous appearance and his blood serum yielded a persistent and strong reaction to the Wassermann test. The brain capacity was 1,188 cubic centimetres and physical development above normal. The Binet quotient was 56 and the Porteus 61. The boy was incapable of being educated in school. Professor Berry described him as a small-headed ament with animalistic tendencies and physical overdevelopment and recommended his permanent detention in an institution.

Dr. Derham pointed out that boys of a type as bad or even worse mentally that this lad were constantly drifting out into the world for lack of suitable institutions for their maintenance.

Dr. Derham's fifth patient, a boy, aged twelve years, was presented on account of his doubtful mentality, associated with infantile habits and erratic behaviour. His brain capacity was 1,317 cubic centimetres; his physical development was above normal. The Binet and Porteus quotients were represented by the figures 83 and 86. This boy was illegitimate, had been in the care of the Children's Welfare Department and had been boarded out in numerous foster homes and institutions from each of which he had been expelled with reports that he was "not normal," "erratic," "of weak intelligence," "of dirty habits, having no control over his sphincters." His school teacher reported that he was dreamy, morose, shy, obedient, progressing. There was no clinical or serological evidence of syphilis. Professor Berry had deferred diagnosis, but had expressed the opinion that the boy was not an imbecile. Dr. Derham differed from the more optimistic view of both Professor Berry and the teacher and adhered to his original view that the boy was at least a moral imbecile unlikely to react normally to ordinary surroundings. He was in the third grade at school.

Four other children, subjects of amentia, were discussed by Dr. Derham and Professor Berry.

**Juvenile Tuberculosis.**

DR. DOUGLAS GALBRAITH presented twelve children in whom he had made the diagnosis of intrathoracic tuberculosis. The average age of the patients was eight years. The diagnosis had been arrived at by the correlation of the clinical history, the symptoms, the physical signs, the result of the von Pirquet test and the skiagraphic evidence. He submitted that diagnosis could be made in no other way. The reports on the skiagrams exhibited had been supplied by Dr. H. M. Hewlett.

Eight children had been in close contact with adults with "open" pulmonary tuberculosis.

The symptoms had varied considerably. The commonest had been a complaint of undue fatigue and loss of energy without an apparent cause. Capricious appetite and irritability of temper were next in order of frequency. In five children there had been night sweats, in two blood-stained expectoration, in two hoarseness, in one tickling of the throat and in three pain in the chest. There had been no cough in three. Loss of weight was inconstant. The signs elicited by physical examination were indefinite. No abnormality whatever had been detected in four children. The commonest signs observed had been those described by Rivière and consisted in impairment of the percussion note in the interscapular space, diminished respiratory murmur over one lung and d'Espine's sign. In children affected with tuberculous bronchitis, rhonchi persistently present and limited to particular localities were regarded as of peculiar diagnostic significance. A reaction to the von Pirquet test was obtained in all the children. In the only child who reacted to the bovine and not to human tuberculin there was evidence of abdominal tuberculosis.

The skiagraphic appearances suggestive of tuberculosis included a hilus shadow extending more than one-third of the distance to the periphery of the thorax, nodules in which there was evidence of calcification, peribronchial fibrosis extending more than two-thirds of the way to the periphery. These shadows extended from the paratracheal region into the middle and apical regions of the lungs. They were regarded as diagnostic of tuberculosis only when they were bilateral. Peribronchial fibrosis was common in children who were not tuberculous, but in such circumstances it was much coarser and without the interlacing and "cotton-wool" beading distinctive of tuberculosis.

Dr. Galbraith stated that the diagnosis of intrathoracic juvenile tuberculosis could not be made from the physical signs, the symptoms, the result of the von Pirquet test or from the skiagraphic picture when these data were considered individually, but could be reached by their correlation. Special significance should be attached to the history of exposure of the child to infection from a tuberculous adult. The importance of diagnosis at this stage lay in the fact that when the disease was limited to the hilus or was just beginning to extend to the lung tissue, the prognosis was good, provided that the child could be placed in good hygienic surroundings. Once a general invasion of the lung tissue had occurred the outlook was extremely bad.

**Abdominal Tumour.**

DR. J. W. GRIEVE presented a girl, aged fifteen years. Two months previously she had become seriously ill with septicaemia. She had had impetiginous sores. Antistreptococcus serum and transfusion of blood had been used. The cervical glands had been enlarged and the spleen palpable. After five weeks in a private hospital the girl had been discharged apparently well, but after the lapse of a fortnight she had again complained of feeling unwell. She had suffered much from pain in the left hypochondrium and it had been observed that there had been a rapid and steady enlargement of the liver and spleen.

A large tumour with a well defined edge and not tender was present in the upper portion of the abdomen. Enlarged, firm, discrete lymphatic glands were palpable in the cervical, axillary and inguinal regions. One of the cervical glands had been removed for histological section. Examination of the blood revealed that the red cells num-

bered 4,200,000 per cubic millimetre and the leucocytes 5,000. The white cells of the polymorphonuclear series comprised 15% only of the total count and lymphocytic cells 82%.

Dr. Grieve asked for suggestions in regard to the diagnosis.

**Purulent Meningitis.**

Dr. Grieve also showed two babies who had recovered from purulent meningitis. The first infant, aged eight months, had been ill for three days on her admission to the Children's Hospital on June 29, 1925. The clinical aspect of meningitis had been very definite and meningococci had been demonstrated in stained smears and cultivated from the cerebro-spinal fluid. Treatment had consisted in the administration of two hundred cubic centimetres of antimeningococcal serum given in the course of six days. Of this quantity one hundred and forty-seven cubic centimetres had been injected into the *cisterna magna* and fifty-three cubic centimetres into the spinal theca.

The second baby, aged ten months, had been admitted on September 9, 1925, having been ill for three days with vomiting and diarrhoea. Stiffness of the neck and other indications of meningism had developed ten days later and diagnostic lumbar puncture had been performed. The cerebro-spinal fluid withdrawn contained pus. In a smear of the deposit very numerous Gram-negative bacilli had been observed. The bacilli gave all the reactions of *Bacillus coli*, including the vigorous fermentation with gas production of lactose, glucose, mannite, dulcite, sorbite and cane sugar and the clotting of litmus milk.

The child recovered after a febrile illness of four weeks. The treatment consisted in the repeated performance of lumbar puncture.

Two other children were shown by Dr. Grieve; they were suffering from cerebral tumour and pyelonephritis respectively.

**Poliomyelitis.**

Dr. Grieve demonstrated from several children who had recently contracted poliomyelitis. The treatment adopted had included rest of the paralysed muscles in the zero position and muscle reeducation. A demonstration of the methods employed in muscle reeducation was given by Miss Andrew and Miss Taylor.

**Rickets.**

DR. JEAN MACNAMARA demonstrated rhachitic lesions in several fox puppies upon which she was engaged in some experimental observations. Eight weeks previously six fox puppies had been taken from a sand burrow in New South Wales, their estimated age then being about one month. At that time they could run about and one had been put on a chain and allowed to exercise himself as much as the chain would permit. The other five had been kept in a large box covered with a sac in such a manner that all sunlight had been excluded. The diet of all the animals for ten days had been young live rabbits. Ten days after capture No. 5 had been put on a chain outside, the diet of rabbits being continued. Numbers 1, 2, 3 and 4 had then been brought to Melbourne and had been kept in a pen covered with a galvanized iron roof. The two sides to the west and south had been closed in completely; those to the north and east had been covered with wide meshed wire netting. Then pen had not been overshadowed by any building. The animals had been taken out at frequent intervals and allowed to run about. For six weeks the diet had been raw gravy beef and water, each puppy's daily ration of meat being one hundred and twenty cubic centimetres.

Number 6 was reported to be quite well and active. No. 5 could not be traced, but when seen three weeks previously he was reported to be weaker than No. 6, but in better condition than any of the other four. When these four had been brought to Melbourne on September 23 No. 3 had been weak in the limbs and inclined to fall; it had seemed tender in the limbs and resented handling. The other three could walk and if allowed to

support the forelimbs against the wire of the cage could stand on the hind limbs. Gradually, however, they had become more flat footed and had soon become unable to walk. No diarrhoea, vomiting or epiphora had been noted in any of the animals.

Dr. MacNamara demonstrated that the muscles were atonic and that progression was impossible. Each of the animals had beading of the ribs and a widely open fontanelle. In a skiagram of the distal epiphysis of the ulna changes characteristic of rickets were demonstrated.

#### Skiagrams and Pathological Specimens.

DR. HERBERT M. HEWLETT exhibited a series of skiagrams. DR. REGINALD WEBSTER demonstrated a collection of pathological specimens.

#### NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

Findlay, Jack Parkes, M.B., Ch.M., 1925 (Univ. Sydney), 38, Lang Road, Centennial Park.  
Street, Thomas Rendell, M.B., Ch.M., 1924 (Univ. Sydney), Bellbird.  
Egan, John, M.B., B.Ch., 1923 (National University, Ireland), 52, Doncaster Avenue, Kensington.  
Hennessy, Kickham Edward, M.B., Ch.M., 1922 (Univ. Sydney), Bankstown.  
Stephen, Robert Longfield, M.B., Ch.M., 1924 (Univ. Sydney), 10, Dudley Street, Randwick.

THE undermentioned have been elected members of the South Australian Branch of the British Medical Association:

Cramp, John Francis, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
England, Clarence William, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Schneider, Michael, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Mallen, Leonard Ross, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Mugford, Frank Kenneth, M.B., B.S. (Univ. Adelaide), Adelaide.  
Hamilton, Reginald Hewgill, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Chester, Harry Leonard, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Chinner, Melville Ernest, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Blackney, William, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Walker, William Delano, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Wigg, Nell, M.B., B.S., 1925 (Univ. Adelaide), Adelaide.  
Harris, John, M.B., B.S., 1924 (Univ. Adelaide), Adelaide.  
Storer, Robert Vivian, M.R.C.S. (England), L.R.C.P. (London) 1923, Adelaide.

#### Medical Societies.

##### THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA.

A MEETING OF THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA was held at the Adelaide University on October 2, 1925.

##### Nephritis.

DR. W. RAY reported the occurrence during this winter of an exceptional outbreak of acute nephritis. The sudden increase in frequency of nephritis of a peculiar type not hitherto familiar might justify the use of the term epidemic nephritis, yet he was acquainted with no case in which two

members of one family were affected. The nephritis was not intense, for example not nearly so intense as after scarlet fever. Blood and albumin occurred in large quantities in the urine, but there was no anuria and there were very rarely any retinal changes. The symptoms were few, the patients complained of headache and a slight degree of oedema. The blood urea was above normal and the blood pressure was increased. In no case was the temperature found above 37.8° C. (100° F.). The age of incidence was variable and in one or two cases the acute nephritis might have been superadded to a preceding chronic nephritis, but there was no conclusive evidence of this. The cases were extremely prolonged and even up to twelve weeks there was a tendency to relapse. Hyaline and epithelial casts were found to be present in both acid and alkaline urine, although much more frequently in the acid urine. One death had occurred due to pulmonary oedema and in this case *post mortem* examination showed that the kidneys were pale, not very swollen, the only abnormality obvious to naked eye inspection being the presence of punctiform haemorrhages. A culture had been taken from the kidney with aseptic precautions and a streptococcus was obtained. He considered that this form of nephritis constituted an entity hitherto unfamiliar in this community and that it was of infective origin, the channel of infection being probably through the upper respiratory tract. As to the subsequent history of these patients nothing was known at present. In one case only had a haemolytic streptococcus been recovered from the tonsillar crypts.

PROFESSOR J. B. CLELAND stated that he had examined the kidney to which Dr. Ray had referred and he found relatively little damage, the nuclei of the cells being still intact. He would describe it as an acute tubular nephritis. In some glomeruli the vessels were distended but there was no true glomerular nephritis.

DR. F. LE MESSURIER stated that he had encountered a moderate number of similar cases in the Children's Hospital. Analogous cases were frequent in America and he had there found that the condition was diagnosed as acute haemorrhagic nephritis and attributed to the streptococcus gaining entry through the upper respiratory tract.

DR. W. RAY mentioned one peculiar case in which a boy who had swallowed potassium bichromate, developed a few days later an acute nephritis resembling the prevailing type which he had just described. But in this case the question had at once arisen whether the origin of the nephritis was infective or due to bichromate poisoning? The boy had been put to bed and after having been kept in bed for two weeks, spontaneously developed a double lobar pneumonia, a most unusual phenomenon to occur while the patient was quiescent in bed.

##### Reaction of the Soil.

PROFESSOR PRESCOTT stated that soils show a considerable range in reaction as expressed in terms of hydrogen ion concentration. Infertile soils were found at both extremes of the  $P_H$  range, acid soils at  $P_H$  3 and alkaline soils at  $P_H$  10 and beyond.

Soil reaction was also of considerable importance in determining the physical properties of the soil and the ideal reaction would appear to be between  $P_H$  6 and  $P_H$  8. In South Australia in areas receiving more than fifty centimetres (twenty inches) of rain slightly acid soils were frequent.

Soils rich in calcium carbonate fully saturated with lime had a  $P_H$  value in the neighbourhood of 8.0 which was also the value for calcium carbonate in equilibrium with the carbon dioxide of the atmosphere. There were indications which suggested two optima for crop production on either side of the neutral point.

Apart from the presence of humus (humic acids) soil reaction was closely related to base exchange phenomena. Soils reacted with neutral salt solutions with exchange of cations between the solution and the soil, the soil giving up usually calcium, magnesium, potassium, sodium. When the soil was acid, calcium was deficient and aluminium and iron appeared in the solution. This formed the basis of a valuable test devised by Professor Comber, of Leeds University. The soil was treated with an aqueous solu-

tion of potassium salicylate or an alcoholic solution of potassium thiocyanate, soils deficient in lime gave up iron which was detected by the characteristic colour of the reagent; neutral or alkaline soils gave negative results.

Under arid conditions and especially in irrigated areas soils reacted by base exchange with natural accumulations of sodium salts with the usual expulsion of calcium, giving rise to sodium saturated soils which were strongly alkaline when freed from the accumulated salts by washing and draining—such soils frequently showed  $P_h$  values as high as ten and were very infertile.

The striking feature of soil reaction problems was the importance of calcium; acid soils were deficient in lime and were improved by the addition of calcium carbonate or calcium hydroxide—alkaline soils were reclaimed by the use of gypsum.

A knowledge of soil reaction was frequently of value in determining the choice of crop for particular areas, particularly when it was desired to avoid certain plant diseases.

#### Experiments on Growth.

PROFESSOR T. B. ROBERTSON reported figures obtained in experiments upon the growth and variability of mice conducted during the previous four years. The limited amount of information at disposal appeared to indicate that exposure to an unfavourable environment led to slowing of the growth of animals, together with an enhancement of variability, whereas in a uniform favourable environment variability diminished when the rate of growth spontaneously declined with age. Aged and senescent animals lost weight and also displayed a very much increased variability, thus resembling the behaviour of younger animals subject to an unfavourable environment. This fact suggested that senescence constituted a progressively increasing unsuitability of the animal for the environment which it inhabited.

#### Abnormal Aorta.

PROFESSOR J. B. CLELAND exhibited a perfect specimen of double aorta.

### Correspondence.

#### PUBLIC HEALTH EXPERTS.

SIR: In the leading article of your issue of the twentieth instant the question of the supply of public health experts is considered.

The recent Royal Commission has emphasized the need for a greater number of such experts and periodically the necessity for greater attention to the preventive aspect of medicine has been stressed in the journal. Preventive medicine has so far been regarded more or less as the Cinderella of the medical world.

It expresses a fine sentiment on which one may lavish many platitudes, but for those who are or are striving to be experts in this field it brings little "grist to the mill."

As with other specialized fields of medicine, one must have a *penchant* for this particular work and the satisfaction gained in this field may reimburse the devotee to some extent.

Compared with other fields of practice there is, however, little of the tangible *quid pro quo* to be obtained therein. The average general practitioner would contemptuously scorn the salary of his preventive *confrère* whose qualifications and attainments are in many instances much better than his own.

Quality as well as quantity is required and in order to attract practitioners of the right type they must be offered a career which will compare not unfavourably with other branches of medical practice.

Money may, perhaps, be a minor matter in a scientific sphere, but it is, nevertheless, very disappointing to one whose principal defect is that his aspirations lead him to preventive medicine (of which the Government has a monopoly), to find that all the financial benefits have gone

to his *confrère* who can, so to speak, sell his brains directly to the public.

How many positions are there in the whole Commonwealth where the recognized expert in preventive medicine is paid a salary which would attract a tyro from general practice?

The two highest paid positions do not exceed £1,500 per annum, whilst for the vast majority of individuals the terminal salary after a life's work will be far short of this sum.

Until preventive medicine is considered to be worth while and worthy of payment on a basis which will compare favourably with other branches of medicine, it is hopeless to expect good men to take up this work. It is unfair to penalize an individual merely because his inclinations lead him into the sphere of preventive medicine where he is regarded merely as a unit or "cog in the wheel" of public health administration.

Here is an excellent opportunity for the British Medical Association to demand equitable remuneration in the manner adopted so successfully by the Society of Medical Officers of Health in England.

Because our numbers are small, we probably carry little weight with the Association, but this cannot warrant the injustice under which we labour.

Yours etc.,

SANITAS.

February 23, 1926.

#### WORKERS' COMPENSATION INSURANCE.

SIR: In a very interesting paper on the above subject in your issue of January 2, 1926, by Dr. Noel Lane, the Principal Medical Officer for Workers' Compensation in Queensland, the writer after stating that in Queensland the worker may have his claim adjudicated on by a medical referee, if he so desires goes on to say: "So far as I am aware there is no Workers' Compensation Act in the world which does not employ non-medical men as the final board of appeal." To my mind that is ridiculous.

Having had considerable experience in workers' compensation I agree with Dr. Lane's conclusion and having the honor to be a member of the Legislative Council of Western Australia, I was able to get the following clauses inserted in the *Workers' Compensation Act* of 1924. Section 14a:

In the event of no agreement being come to between the worker and the employer, as to the worker's condition, or fitness for employment the Clerk of a Local Court on application being made to the Court by either party, may on payment by the applicants of such fee, not exceeding two pounds refer the matter to a medical referee.

b. The medical referee to whom the matter is so referred shall in accordance with regulations made by the Governor give a certificate as to the condition of the worker and his fitness for employment, specifying where necessary the kind of employment for which he is fit and that certificate shall (subject to an appeal to a medical board consisting of three members which shall have jurisdiction to hear and determine such appeal) be conclusive evidence as to the matters so certified.

c. Where no agreement can be come to between the employer and the worker as to whether or to what extent the incapacity is due to the accident, the provisions of this paragraph shall, subject to any regulations made by the Governor, apply as if the question were a question as to the condition of the worker.

The regulations were only gazetted in June, 1925, so it is too soon to form an opinion on the working of this part of the Act, but I shall be very much disappointed if this innovation does not result in the injured workman getting just compensation with a minimum of legal expense and also protect the employer from grossly exaggerated claims.

Its success no doubt depends on the competency and impartiality of the medical referee and board and in

speaking on the subject I was careful to emphasize that those appointed to such a position should possess the necessary qualifications and that a surgical appointment on a public hospital was an essential qualification.

Under the old Act there was a section with reference to the appointment of a medical referee, but both parties had to agree to such and so it was a dead letter and there was no provision for an appeal to a medical board. I may add that the Western Australian Act of 1924 is regarded as the most liberal in its provisions of any similar Act in Australia and that the Legislative Council had a large share in making it a just and workmanlike measure.

Yours etc.,

ATHEL J. H. SAW, M.D., Camb. F.R.C.S.E.  
242, St. George's Terrace, Perth,  
January 23, 1926.

#### BOILS.

SIR: I read the letter in current issue anent boils where it says: "What the writer would be gratified to know—is it possible to actually stop a boil developing when it is first discovered as a small angry pimple?" and thought I would write my own personal experience of a very simple method of dealing with such threatenings, also scratches, mosquito bites, pimples on face *et cetera*. In my household is kept ready mixed a lotion, a saturated solution of carbolic acid made by diluting strong carbolic acid with cold rain water that has been boiled; theoretically, it is about one in twenty-five parts, but practically I dare say it is stronger as I always leave at bottom of lotion bottle a little ring of undissolved carbolic acid, but in using it take care only to use the supernatant part.

A few drops of this lotion is placed over the affected area and allowed to dry on, repeated in an hour or two if necessary. Time is, as usual, the essence of the contract to be successful. As soon as the trouble occurs, on must go the lotion, no waiting till a more convenient opportunity occurs. Get the lotion bottle and put some on at once and in the great majority of instances all will be well. Even when a little advanced, a compress of lint saturated with the carbolic lotion and left on day and night will frequently arrest the further development of a boil. Myself and family have continually stopped troubles such as arise from causes mentioned before and in gratitude I send this, hoping many others will be able to experience the same benefit as we have had.

Yours etc.,

O. PENFOLD, Medical Officer,  
Bendigo Benevolent Asylum.

Bendigo,  
February, 20, 1926.

#### A CORRECTION.

SIR: Reference to my article on "Intoxication Following the Use of Coal Tar Paints," I have to request readers thereof to delete "benzine" and substitute "benzene."

I regret that the error of including a mineral oil derivative in a group of coal tar products has escaped my vigilance in proof reading and trust that the mistake was sufficiently obvious not to mislead any interested reader.

Yours etc.,

T. A. KIDSTON,  
Surgeon Lieutenant Commander,  
Flinders Naval Hospital, Royal Australian Navy.  
Westernport, February 19, 1926.

#### DICHOTOMY.

SIR: As you point out in your leading article, December 5, 1925, there is little chance of ascertaining if the practice of dichotomy is common. If this is so, it is not much use discussing the matter as an ethical offence.

It seems apparent from the correspondence that general practitioners think that surgeon specialists have too exalted a position in the medical community and further-

more in vulgar parlance, are prone to grab patients with surgical disease from the general practitioners, pushing the latter on one side.

There is one aspect of the subject that has not been touched upon—nobody seems to look upon surgery from the point of view of preventive medicine. Compare the surgical services in war and peace.

It is a great pity that the recent Health Commission did not include this subject in the scope of their investigations.

From the public health viewpoint the one bright spot in the practice of dichotomy is the fact that the patient has the advantage of the service of a skilful surgeon.

"Surgeon's" letter is most instructive. It would be well if each person in the community could be treated by one so well trained as "Surgeon." But there are thousands of people in Australia who can not go to a surgeon practising in the correct street of a big city.

Is it not time then that Mahomet went to the mountain?

Yours etc.,

"SURGEON IN INCORRECT STREET."

#### Obituary.

ROBERT GEORGE ALCORN.

IT is with regret that we announce the death of Dr. Robert George Alcorn which occurred at West Maitland, New South Wales, on February 20, 1926.

PATRICK RICHARD KENNA.

WE regret to announce the death of Dr. Patrick Richard Kenna which occurred at his residence, 195, Macquarie Street, Sydney, on March 5, 1926.

#### CORRIGENDUM.

IN our issue of February 27, 1926, Dr. H. C. E. Donovan is described in connexion with his article on Cæsarean section as Honorary Assistant Surgeon to the Women's Hospital, Crown Street. Dr. Donovan's position is that of Honorary Surgeon.

#### Proceedings of the Australian Medical Boards.

##### NEW SOUTH WALES.

THE undermentioned have been registered under the provisions of the *Medical Act*, 1912 and 1915, as duly qualified medical practitioners:

Lennon, Laurence Reuben, M.B., B.S., 1922 (Univ. Melbourne), Wagga.  
McIntosh, James Joseph, M.B., 1925 (Univ. Sydney), Goulburn.

##### Additional Qualifications.

Holcombe, Tristram Essex Young, Ch.M., 1926 (Univ. Sydney), Stroud.  
Badham, Charles, D.P.H., 1926 (Univ. Sydney), Sydney.  
Ferguson, Eustace William, D.P.H., 1926 (Univ. Sydney), Sydney.  
Puckey, Selina Courtenay, D.P.H., 1926 (Univ. Sydney), Sydney.

#### Medical Appointments.

Dr. Edward Yates has been appointed Acting Resident Magistrate for the Roebourne Magisterial District and Acting Magistrate of the Local Court at Roebourne, also Acting Chairman of the Roebourne Court of Sessions, Western Australia.

Dr. Victor Rupert Delany (B.M.A.) has been appointed by the Governor in Council, South Australia, an Honorary Commissioner to inquire into and report upon the treatment of skin diseases and dermatology generally in Great Britain, the Continent of Europe and the United States of America.

Dr. Wendell Inglis Clark (B.M.A.) has been appointed an Inspector for the purposes of *The Anatomy Act*, 1869, Tasmania.

Dr. Michael Joseph Costelloe (B.M.A.) has been appointed Public Vaccinator at Footscray, Victoria.

Dr. Marian Hamp has been appointed a Resident Medical Officer at the Adelaide Hospital.

Dr. Edward Angus Johnson has been appointed Honorary Consul of Mexico at Adelaide.

Dr. Norman Keith Robertson has been appointed Medical Officer, Department of Education, New South Wales.

Dr. Philip Oswald Andrew (B.M.A.) has been appointed Government Medical Officer at Tuncurry, New South Wales.

### Books Received.

THE PRACTICAL MEDICINE SERIES, COMPRISING EIGHT VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY: Under the General Editorial Charge of Charles L. Mix, A.M., M.D.; Volume II: General Surgery, Edited by Albert J. Ochsner, M.D., F.R.M.S., L.L.D., F.A.C.S., F.R.C.S.Ir.(Hon.); 1925. Chicago: The Year Book Publishers. Crown 8vo, pp. 712, with illustrations. Price: \$3.00 net.

THE PRACTICAL MEDICINE SERIES, COMPRISING EIGHT VOLUMES ON THE YEAR'S PROGRESS IN MEDICINE AND SURGERY: Under the General Editorial Charge of Charles L. Mix, A.M., M.D.; Volume III: The Eye, Ear, Nose and Throat, Edited by Charles P. Small, M.D., Albert H. Andrews, M.D., and George E. Shambaugh, M.D.; 1925. Chicago: The Year Book Publishers. Crown 8vo, pp. 496, with illustrations. Price: \$2.00 net.

POTTER'S COMPEND OF MATERIA MEDICA, THERAPEUTICS AND PRESCRIPTION WRITING, by A. D. Bush, B.S., M.D.; Ninth Edition, Revised; 1926. Philadelphia: P. Blakiston's Son and Company. Crown 8vo, pp. 273. Price: \$2.00 net.

HEADACHE: ITS CAUSES AND TREATMENT, by Dr. Thomas F. Reilly; 1926. Philadelphia: P. Blakiston's Son and Company. Post 8vo, pp. 253. Price: \$3.00 net.

NON-SURGICAL TREATMENT OF DISEASES OF THE MOUTH, THROAT, NOSE, EAR AND EYE, by Thomas H. Odensal, M.D.; 1926. Philadelphia: P. Blakiston's Son and Company. Demy 8vo, pp. 489. Price: \$4.00 net.

MENTAL INVALIDS, by C. C. Easterbrook, M.A., M.D., F.R.C.P.E.; 1926. Edinburgh: Oliver and Boyd. Royal 8vo, pp. 86. Price: 5s net.

MY LIFE AND WORK, by Henry Ford, in collaboration with Samuel Crowther; Ninth Australian Edition; 1926. Sydney: Cornstalk Publishing Company and Angus and Robertson, Limited. Crown 8vo, pp. 288. Price: 2s. 6d. net.

THE MEDICAL FOLLIES, by Morris Fishbein, M.D.; 1925. New York: Boni and Liveright. Sydney: Angus and Robertson, Limited. Post 8vo, pp. 223. Price: 9s. net.

FORTY-THIRD ANNUAL REPORT OF THE STATE DEPARTMENT OF HEALTH FOR THE YEAR ENDING DECEMBER 31, 1925; State of New York; Volume II. Division of Vital Statistics; 1925. Albany: J. B. Lyon Company. Royal 8vo, pp. 328.

A TEXTBOOK OF PHYSIOLOGY, by William D. Zoethout, Ph. D.; Second Edition; 1925. St. Louis: The C. V. Mosby Company. Demy 8vo, pp. 616 with illustrations. Price: \$4.50 net.

### Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxvi.

DEPARTMENT OF PUBLIC HEALTH, VICTORIA: Medical Superintendent, Tuberculosis Division.

THE UNIVERSITY OF MELBOURNE: Stewart Scholarship in Medicine.

### Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C. 1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30-34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

### Diary for the Month.

MAR. 15.—New South Wales Branch, B.M.A.: Organization and Science Committee.  
 MAR. 16.—Tasmanian Branch, B.M.A.: Council.  
 MAR. 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.  
 MAR. 17.—Western Australian Branch, B.M.A.: Branch.  
 MAR. 17.—Section of Obstetrics and Gynaecology, New South Wales.  
 MAR. 23.—New South Wales Branch, B.M.A.: Council (Quarterly).  
 MAR. 24.—Victorian Branch, B.M.A.: Council.  
 MAR. 25.—New South Wales Branch, B.M.A.: Branch (Annual).  
 MAR. 25.—South Australian Branch, B.M.A.: Branch.  
 MAR. 26.—Queensland Branch, B.M.A.: Council.  
 MAR. 30.—New South Wales Branch, B.M.A.: Council.  
 APR. 1.—South Australian Branch, B.M.A.: Council.  
 APR. 6.—Tasmanian Branch, B.M.A.: Council.  
 APR. 7.—Victorian Branch, B.M.A.: Branch.  
 APR. 7.—Western Australian Branch, B.M.A.: Council.  
 APR. 8.—Victorian Branch, B.M.A.: Council.  
 APR. 8.—New South Wales Branch, B.M.A.: Clinical Meeting

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